

# M

# edical

# TIMES

THE JOURNAL OF GENERAL PRACTICES

Chronic Obstructing *He*itis  
Speech After Laryngectomy  
Multiple Sclerosis  
Pain Relief Study  
Obstetrical Emergencies  
Status of Iron Therapy  
Birth Injuries  
Chronic Relapsing Pancreatitis  
Obesity (Refresher)  
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Pointers on Tax Saving  
Ways to Postpone Tax on Profit  
Selling "Short" Explained  
A Look at Middle Eastern Oils  
Suggested Investments

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*a true  
cough specific  
non-narcotic*

## **ROMILAR 'Roche'**

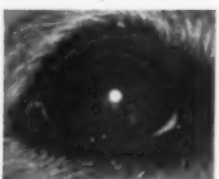
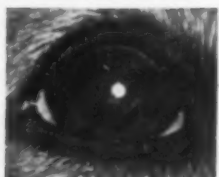
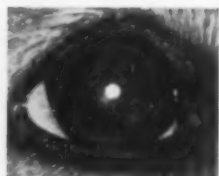
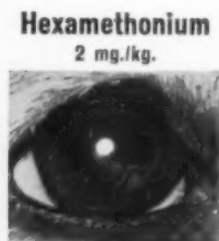
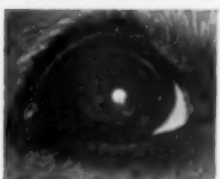
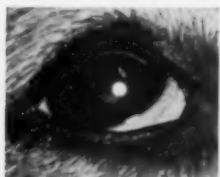
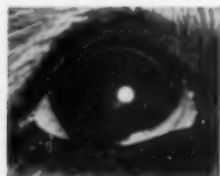
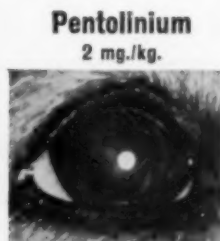
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1. Plummer, A. J., Trapold, J. H., Schneider, J. A., Maxwell, R. A., and Earl, A. E.: *J. Pharmacol. & Exper. Therap.* 115:172 (Oct.) 1955. 2. Grimson, K. S.: *J.A.M.A.* 158:359 (June 4) 1955. 3. Smith, J. R., and Hoobler, S. W.: *Univ. Michigan M. Bull.* 22:51 (Feb.) 1956. 4. Grimson, K. S., Tarazi, A. K., and Frazer, J. W., Jr.: *Circulation* 11:733 (May) 1955.

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1. Russ, J.D.: Personal communication.

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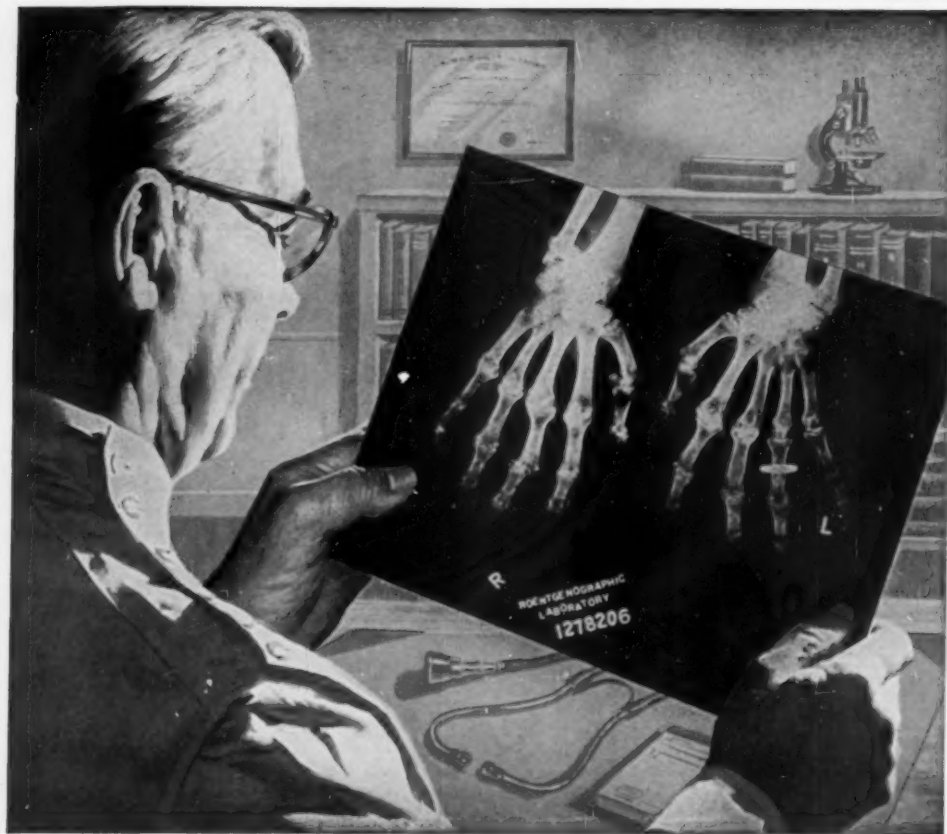
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**BPA**

Opinions expressed in articles are those of the authors and do not necessarily reflect the opinion of the editors or the Journal.

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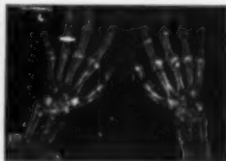
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1. *J.A.M.A.* 159:545 (Oct. 15) 1955.
2. *J.A.M.A.* 158:586 (June 4) 1955.



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Vitamin C	40.0 mg.
Vitamin B <sub>12</sub>	4.0 mcg.
Thiamine HCl (B <sub>1</sub> )	2.0 mg.
Riboflavin (B <sub>2</sub> )	2.0 mg.
Nicotinamide	10.0 mg.
d-Panthenol	6.0 mg.
Pyridoxine HCl (B <sub>6</sub> )	1.2 mg.
L-Lysine HCl	25.0 mg.
Cysteine HCl	5.0 mg.
Inositol	5.0 mg.
Choline*	5.0 mg.

Iron*	3.0 mg.
Calcium*	40.0 mg.
Phosphorus*	30.0 mg.
Iodine*	75.0 mcg.
Potassium*	2.5 mg.
Manganese*	0.5 mg.
Zinc*	0.5 mg.
Magnesium*	3.0 mg.

\*Supplied as choline bitartrate, ferrous gluconate, calcium lactate and the hypophosphite, calcium hypophosphite, potassium iodide, potassium gluconate, manganous gluconate, zinc glycerophosphate and magnesium gluconate.

**DOSAGE:** Children — 1 to 2 teaspoonfuls (5-10 cc.) daily.

Adults — 2 teaspoonfuls (10 cc.) twice daily, or as required.

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# M<sup>e</sup>dical TIMES

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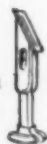
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I am a **STANDBY** and my doctor



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I've belonged to Dr. Phil for ten years now,



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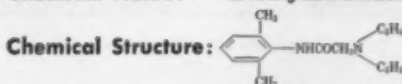
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Trade Name: XYLOCAINE

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Potency: Two to three times that of procaine.

Duration of Action: Two to three times that of procaine.

Anesthetic Index: 1.8.

Surface Anesthetic Index: 8.

Safety Factor: Two to three times that of procaine (because smaller concentrations and volumes are clinically as effective).

Sensitivity: Allergic manifestations and sensitizing reactions have never been reported.

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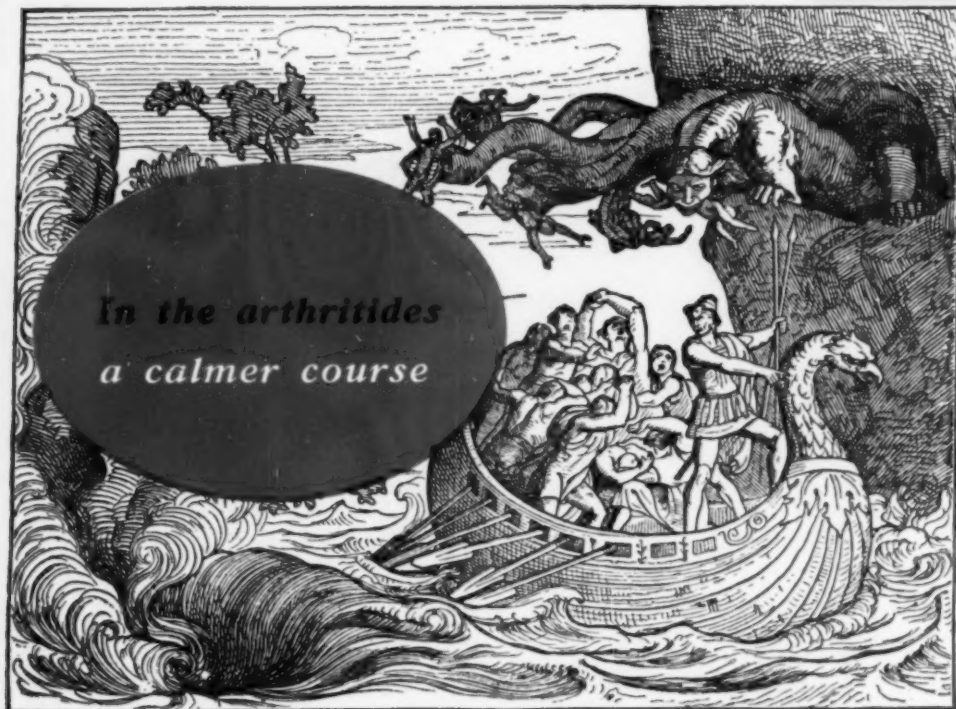
Versatility: Effective in local infiltration anesthesia; in major conduction anesthesia; in temporary therapeutic blocks for relief of pain; in topical anesthesia.

Supplied: Vials, 0.5%, 1%, 2% in 20 cc., 50 cc. without and with epinephrine 1:100,000; 100 cc. vials, 1% without epinephrine. Ampoules, 2 cc., 2% without and with epinephrine 1:100,000.

Astra Pharmaceutical Products, Inc., Worcester 6, Mass.

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*between the hazards of high steroid dosage  
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Because of the complementary action of cortisone and the salicylates, Salcort produces a greater therapeutic response with lower dosage. Side effects are not encountered, and no withdrawal problems have been reported.

One study concludes: "Salicylate potentiates the greatly reduced amount of cortisone present so that its full effect is brought out without evoking undesirable side reactions."<sup>1</sup>

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Rheumatoid arthritis . . .  
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muscular affections

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Sodium salicylate . . . .	0.3 Gm.
Aluminum hydroxide gel, dried . . . . .	0.12 Gm.
Calcium ascorbate . . . .	60.0 mg.
(equivalent to 50 mg. ascorbic acid)	
Calcium carbonate . . . .	60.0 mg.

<sup>1</sup>Busse, E.A.: Treatment of Rheumatoid Arthritis by a Combination of Cortisone and Salicylates. *Clinical Med.* 11:1105

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## Off the Record . . .

### True Stories From Our Readers

Each incident described has been contributed by one of our readers. Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported German apothecary jar will be sent in appreciation for each accepted contribution.

#### **"That's what I thought!"**

This happened before laboratory facilities were as common as they are today.

Dr. Smith, a general practitioner, had called Dr. Jones into consultation over a child who was running a continuous high fever.

The doctors were standing on the front porch engaged in serious discussion over the illness of the child when the grandmother rushed out, grabbed Dr. Smith by the sleeve to gain his attention and in an excited voice demanded that Dr. Smith tell her why the child had such a high fever.

"Really," said Dr. Smith in his gracious southern manner, "the doctor and I are trying to arrive at a decision at this moment."

The lady then turned her attention to Dr. Jones. "Dr. Jones, we have just taken little Martha's temperature, and she has 105. You are a specialist, and I want you to tell me *exactly* why that child is having that high fever."

"It is a concurrent complication," Dr. Jones replied.

"I knew that you would know; I have been trying for three days to get my daughter to send for you." She walked back into the house with contentment written all over her face.

J.M.B., M.D.  
Shreveport, La.

#### **He Went Bust**

I met a former patient working in a department store. When I asked him what he was doing, he told me, "I'm in brassieres."

L.L., M.D.  
Indianapolis, Ind.

#### **Just a Little "Father"**

It was around two in the morning, and a very anxious voice came over the telephone, "Please, Doctah, come to my house at once if not sooner my daughter is 'fathering.'"

Without further explanation, except

—Concluded on page 21a

FOR POSITIVE DIURESIS

# ROLICTON\*

- oral b.i.d. dosage
- continuous control of edema

The new, highly effective oral diuretic, Rolicton, greatly simplifies the task of maintaining an edema-free state in the patient with congestive heart failure. Rolicton meets the criteria for a dependable diuretic: continuous effectiveness, oral administration and clinical safety.

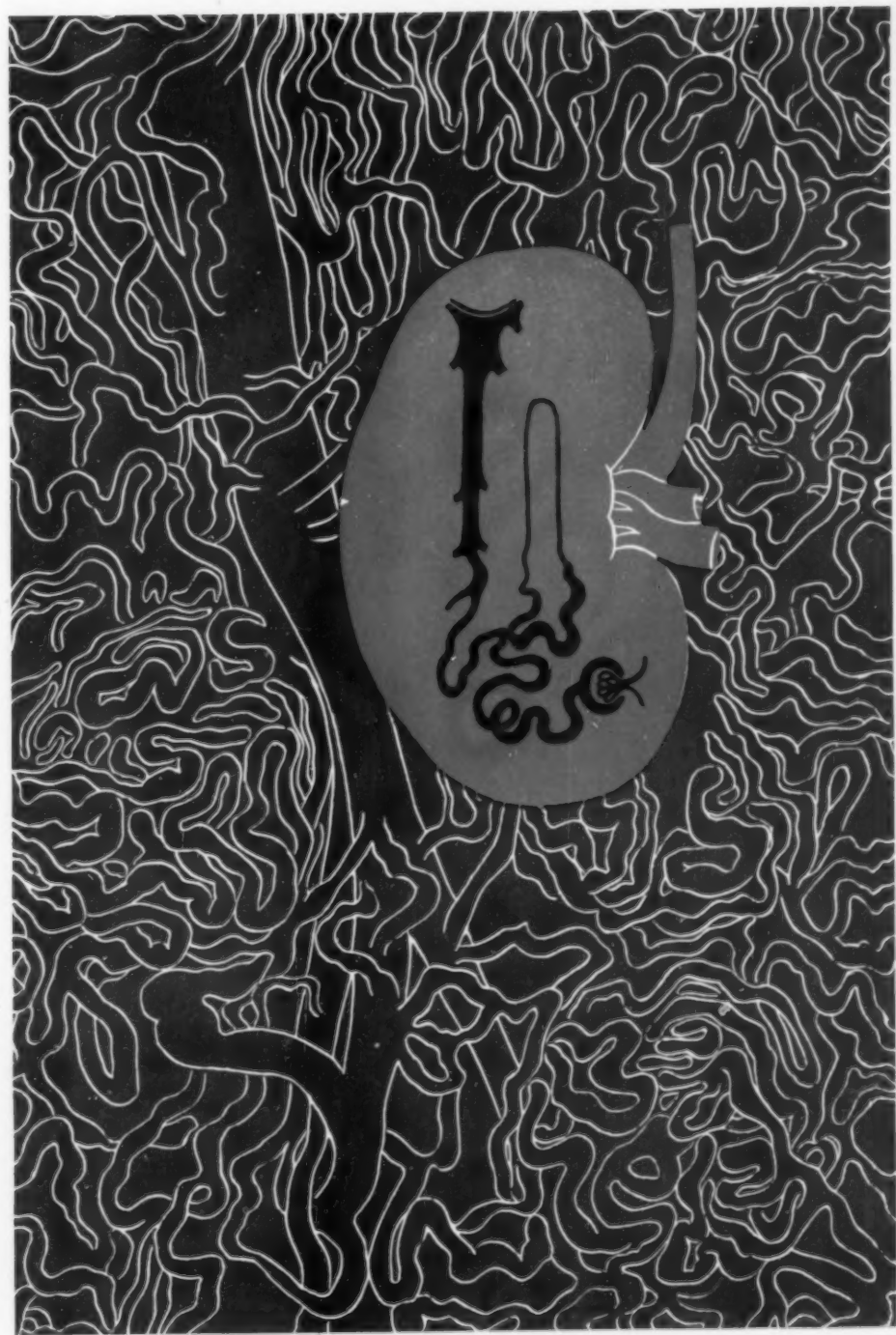
In extensive clinical studies the diuretic response clearly indicates that a majority of patients can be kept edema-free with Rolicton. In these investigations it was noted that side reactions were uncommon. When they did occur they were usually mild.

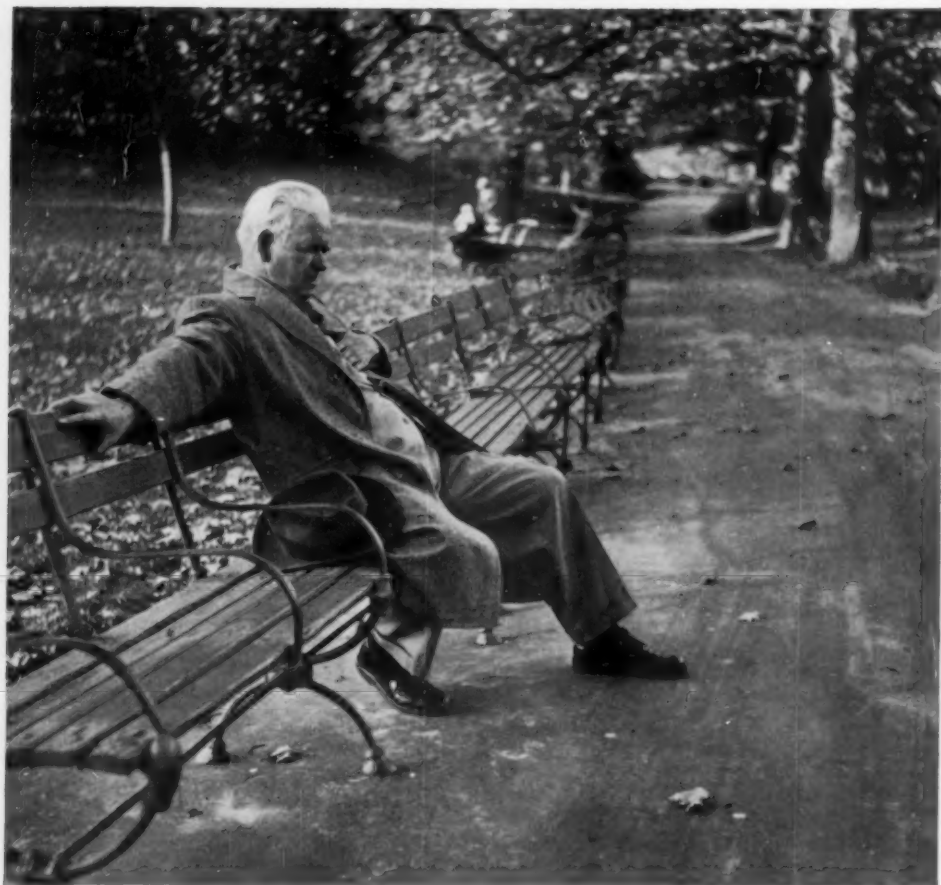
In most edematous patients Rolicton may be employed as the sole diuretic agent. When used adjunctively in severe cases, Rolicton is also valuable in eliminating the "peaks and valleys" associated with the parenteral administration of mercurial diuretics.

One tablet of Rolicton b.i.d., after meals, is usually adequate for maintenance therapy after the first day's dosage of four tablets. Some patients respond well to one tablet daily. G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

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SEARLE





to improve  
respiration in cardiac  
decompensation

**C I B A**

SUMMIT, N. J.

1/22/55

**SUPPLIED**

*Oral Solution:*  
bottles of 1 and 3  
fluidounces and  
bottles of 1 pint.  
Also available for  
intravenous or  
intramuscular use:  
*Ampula*, 1.5 ml.  
and 5 ml.;  
*Multiple-dose Vials*,  
20 ml.

# Coramine<sup>®</sup>

(nikethamide CIBA)

## ORAL SOLUTION (25% aqueous)

Coramine is a proved respiratory and central nervous system stimulant, useful in controlling Cheyne-Stokes respiration and paroxysmal dyspnea associated with cardiac decompensation.

The choice of oral or intravenous therapy depends upon the seriousness of the situation. When a prompt response is necessary, the intravenous route is preferred. Oral administration produces a slow, progressive improvement—usually one to three days elapse before the optimum benefit is realized.

Since Coramine is rapidly and completely absorbed from the gastrointestinal tract, the Oral Solution (3 to 5 ml., three to five times a day) may be administered in cases of chronic cardiac decompensation or in convalescence following acute coronary occlusion.

to state his name and address, he hung up. Intrigued by the strange diagnosis I followed up the call, and sure enough the caller's sixteen-year-old unmarried daughter was certainly "fathering". She made some man a "father" in the form of an eight pound baby boy.

M.L.D., M.D.  
Brinkley, Ark.

### Poem

The following may be of interest. The author is a woman who had just returned from the hospital after having both breasts removed for chronic cystic mastitis.

#### Patient's Gratitude

The service was good, the care was the best;  
They took what they could, a load off my chest.  
The pills were real tasty, and I had a good rest,  
I got well quite hasty . . . on #5 West.  
So thank you my friends, you've been very nice  
But 'fore I come back I'm goin to think twice.  
I've cleaned up my room, taken all I could find:  
Ain't nothing left, but my good front behind!

R.B.E., M.D.  
Hamden, Conn.

### The Mouths of Babies

When our daughter, Mary Jude, was 5 years old she was enrolled in a kindergarten at a Sisters' school.

One day the kindergarten sister was

ill and the class was admitted to the first grade room where the sister could supervise them. On this particular day, the first grade had a Bible lesson about the creation of Adam and Eve. My daughter must have been very interested because she raised her hand to ask a question. This was the episode as the sister later gave it to us.

Mary Jude—"Sister, did God give Adam an anesthetic when He took out Adam's rib?" The sister surprised at the import of the question, came back with: "Why did you ask that?" To which Mary Jude replied, "Well, it was a Major Operation wasn't it?"

I never gave it a thought before but it does say that Adam was made to fall into a deep sleep, so I imagine that this was the first record of anesthesia in the history of man. And it took my 5 year old to bring it to my notice.

F.W.R., M.D.  
Louisville, Kentucky

### Emergency

On a Sunday afternoon I answered the door for my doctor husband, whose office is in our home.

A young woman rushed past me, saying she hurried to get here before office hours were over. I explained to her that the Doctor did not have hours on Sunday, and saw patients there only in cases of emergency. After a moment's hesitation, she said, "Well, that's o.k. Could I make an appointment for four o'clock next Sunday for an emergency?"

E.E.M., M.D.  
Auburn, New York

new 100 mg. capsule

for greater convenience and dosage flexibility.

# Colace

DIOCTYL SODIUM SULFOSUCCINATE, MEAD JOHNSON\*

In chronic constipation and in patients with hemorrhoids, Colace provides a safe and gentle way to prevent hard stools. By reducing surface tension, Colace increases the wetting efficiency of intestinal water. This purely physical action keeps stools normally soft and softens hardened stools for easy, natural passage.

No undesirable side effects have been reported with Colace. There are no known contraindications to its use.

\*Patents pending

# softens stools for easy passage

without laxative action • without adding bulk

## THE COLACE FAMILY

Colace Capsules 100 mg.,  
bottles of 30, 60 and 250.

Colace Capsules 50 mg.,  
bottles of 30, 60 and 250.

Colace Liquid (1% Solution:  
1 cc.=10 mg.), 30 cc.  
bottles with calibrated  
dropper.



## COLACE DOSAGE RECOMMENDATIONS

### SUGGESTED ORAL DAILY DOSAGE†

0 to 3 years . . . 10 to 40 mg.

3 to 6 years . . . 20 to 60 mg.

6 to 12 years . . . 40 to 120 mg.

Adults . . . . . 50 to 200 mg.

†Colace may be given in divided doses. The higher dosage is recommended during initial phase of therapy. Dosage should be adjusted as required by individual response.

**Note:** When bowel motility is impaired, a mild peristaltic stimulant or Colace-containing enemas may be needed in addition to Colace by mouth.

**ENEMA FOR ACUTE CONSTIPATION, FECAL IMPACTION**  
add 50 to 100 mg. of Colace (5 to 10 cc. of Colace Liquid) to a retention or flushing enema.

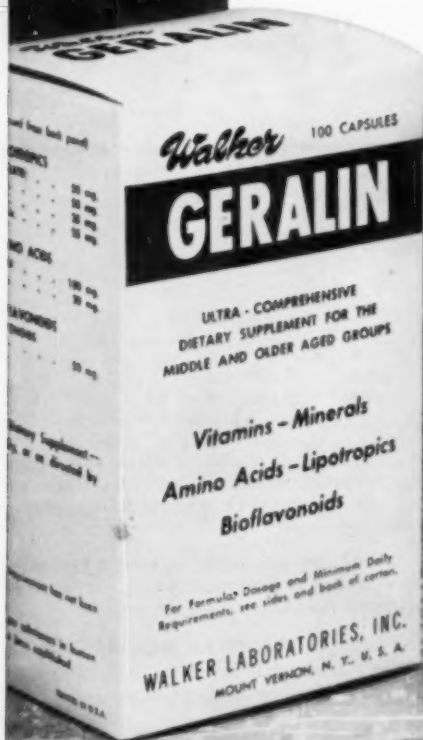
## MEAD JOHNSON

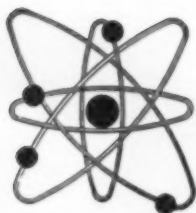
SYMBOL OF SERVICE IN MEDICINE  
102354

*To help maintain vigorous  
muscle and nerve tone...  
To improve vascular and  
cerebral vitality...*

SIG: 2 CAPS DAILY

BOTTLES OF 100 AND 1000.





## *Diagnosis, Please!*

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology,  
New York University College of Medicine and Director of Radiology, Bellevue Hospital Center

### WHICH IS YOUR DIAGNOSIS?

- |                      |                     |
|----------------------|---------------------|
| 1. Sprue             | 3. Normal           |
| 2. Whipple's disease | 4. Peritoneal fluid |

*(Answer on Page 112a)*



*a new maximum*  
in therapeutic  
effectiveness

*a new maximum*  
in protection  
against  
resistance

*a new maximum*  
in safety and  
toleration

multi-spectrum  
synergistically  
strengthened...

for  
your  
entire



# Sigma

OLEANDOMYCIN TETRACYCLINE



patient  
population



*a new certainty*

in antibiotic therapy,  
particularly for  
the 90% of patients  
treated at home  
and in the office

# mycin\*

Superior control of infectious diseases through superior control of the changing microbial population is now available in a new formulation of tetracycline, outstanding broad-spectrum antibiotic, with oleandomycin, Pfizer-discovered new antimicrobial agent which controls resistant strains. The synergistic combination now brings to antibiotic therapy: (1) a new fuller antimicrobial spectrum which includes even "resistant" staphylococci; (2) new superior protection against emergence of new resistant strains; (3) new superior safety and toleration.

\*TRADEMARK

**Pfizer**



FOR EFFECTIVE STOOL SOFTENING



100 MG.

(dioctyl sodium sulfosuccinate, Blair)

# DOXOL<sup>U.S.</sup>

HIGH-POTENCY 100 MG. CAPSULES

Latest clinical investigation\* indicates that stool softening reaches "...near the maximum effectiveness" with high-potency levels of dioctyl sodium sulfosuccinate (d.s.s.). DOXOL, the only 100 mg. capsule of d.s.s., combines this effective stool softening action with patient convenience and economy.

**DOXOL:** ADULTS—One or two capsules daily. OLDER CHILDREN—One capsule daily.

**SUPPLY:** Boxes of 50 capsules. Each capsule contains 100 mg. dioctyl sodium sulfosuccinate.

**DOXOL NORMALIZES EVACUATION BY  
NORMALIZING STOOL CONSISTENCY**

\*Spiesman, M. G., Malow, L.: *Journal Lancet* 76:164 (June) 1956.



**BLAIR LABORATORIES, INC.**  
SHORT HILLS, NEW JERSEY

MEDICAL TIMES



## Coroner's Corner

### "POOR MARKSMANSHIP"

Study of the clothing worn by the victim of an obscure or violent death will frequently furnish information and data which help solve an otherwise insoluble problem.

The body of a 65-year-old man was brought to the Coroner's Office by the police along with an automatic pistol and two empty shell cases found at the scene of death. A single close-range gunshot entrance wound was present in the right temporal region. Autopsy disclosed that death was due to laceration of the brain. A single bullet was found within the brain. There were no other injuries.

While the circumstances seemed to point to suicide (the victim was known to have been depressed), the police were unable to account for the firing of two bullets. Examination of the decedent's fedora hat, brought in with the body, furnished a logical explanation for the presence of two cartridge cases.

On the right side of the hat, above the band, there was a con-

tact type entrance gunshot perforation with fouling and stippling of the surrounding area by smoke and spent gunpowder. On the inside of the hat, the perforation was some distance above the sweat band. An exit type perforation was present on the left side of the crown, marking the site of egress of the bullet. On the underside of the right side of the brim there was a second separate area of fouling and stippling. With the hat on the head of the deceased, this latter area was in line with the site of entrance of the fatal bullet.

The shooting episode was reconstructed on the basis of the above findings. The would-be suicide victim had first held the gun against the side of his hat and had shot through the hat and over the top of his head. He then improved his aim by lowering the gun below the brim and was successful with his second shot.

Thus the victim had missed his own head at contact range, admittedly an example of marksmanship at its worst. L.A., M.D.





for relief of cough  
from colds or allergies...  
two favorite formulas

Patients taking BENYLIN EXPECTORANT or AMBENYL EXPECTORANT for the first time are surprised and pleased at the promptness with which frequency and severity of coughing are controlled. Duration of cough is usually shortened as well, because each of these widely prescribed medications combats underlying conditions tending to perpetuate the coughing cycle. Each provides demulcent and expectorant agents, plus antihistaminic-antispasmodic components, which: soothe irritated respiratory mucosa; dilute mucus for easier expectoration; lessen bronchial spasm; and relieve nasal congestion, sneezing, and lacrimation.



## BENYLIN® EXPECTORANT

BENYLIN EXPECTORANT  
contains in each fluidounce:

Benadryl® hydrochloride (diphenhydramine hydrochloride, Parke-Davis)	80 mg.
Ammonium chloride	12 gr.
Sodium citrate	5 gr.

Chloroform	2 gr.
Menthol	1/8 gr.
Alcohol	5%

Dosage: Adults, 1 or 2 teaspoonfuls every three to four hours. Children, 1/2 to 1 teaspoonful every four hours.

Supplied in 16-ounce and 1-gallon bottles.



## AMBENYL® EXPECTORANT

AMBENYL EXPECTORANT  
contains in each fluidounce:

Ambodryl® hydrochloride (bromodiphenhydramine hydrochloride, Parke-Davis)	24 mg.
Benadryl hydrochloride (diphenhydramine hydrochloride, Parke-Davis)	56 mg.

Dihydrocodeinone bitartrate	1/8 gr.
Ammonium chloride	8 gr.
Potassium guaiacolsulfonate	8 gr.
Menthol	q.s.
Alcohol	5%

Dosage: Every three or four hours—adults, 1 to 2 teaspoonfuls; children, 1/2 to 1 teaspoonful.

Supplied in 16-ounce and 1-gallon bottles.



PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

**September 25.** Second and third degree burns caused by flaming gasoline. Gauze pressure dressings of White's Vitamin A & D Ointment were changed at weekly intervals.



**October 25.** Healing is complete with minimal scar tissue and no contractures.



## SEVERE BURN OR MINOR IRRITATIONS

## WHITE'S VITAMIN A & D OINTMENT

Topical application of White's Vitamin A & D Ointment speeds restoration of epithelial and connective tissues. Even severe burns respond favorably to the healing action of Vitamin A & D Ointment.

Diaper rash, also chafing and abrasions, readily yield to its therapeutic and protective qualities. Prepared in suitable lanolin-petrolatum base, White's Vitamin A & D Ointment is pleasant to use, free from excessive oiliness, and will keep indefinitely. Does not stain the skin and is easily laundered from diapers or clothing.

You can prescribe it in 1 1/2 oz. or 4 oz. tubes; 1 lb. or 5 lb. jars.



WHITE LABORATORIES, INC., KENILWORTH, N. J.

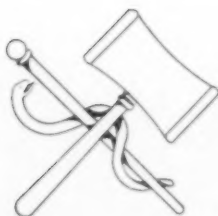
- diaper rash
- soft tissue injuries
- dry skin
- bedsores
- slow healing wounds
- varicose and diabetic ulcers
- fissured nipples



**August 25.** A typical case of diaper rash, characterized by excoriation and soreness.



**September 1.** After only one week of local applications with White's Vitamin A & D Ointment each time diaper was changed, the skin surface is normal.



## What's Your Verdict?

Edited by Ann Picinich, Member of the Bar of New Jersey

A physician is expelled from a local medical association for violation of certain principles of ethics of the American Medical Association, among which is the following:

"When a physician does succeed another physician in charge of a case, he should not disparage by comment or insinuation the one who preceded him."

The physician brought a court action against the medical association seeking restoration to membership and monetary damages for injuries sustained. The court record discloses the following.

A widow started a proceeding in the Industrial Accident Commission to recover benefits under the workmen's compensation law for the death of her husband who was injured at the place of his employment. The employer requested that an autopsy be performed, which was so done by a doctor who thereupon rendered a pathological report. The report indicated that the deceased probably died of natural causes.

The widow's attorney then requested the physician in this case to render a report. In it he made certain statements of criticism of the pathological report previously made. Specifically, he described the pathologist as one "who is not a certified pathologist.

and who has rendered a very inept report." Again, he referred to him as a "rather inept and inept individual," and further stated that a "more experienced pathologist would have examined the heart a little more thoroughly." His report was based upon a study of the inquest and various medical reports. Both reports were turned in to the Commission which made an award in the widow's favor.

Counsel for the medical association concede that the doctor was not a certified pathologist, but argue that he was amply qualified in fact as a licensed physician who had specialized in pathology for some years. They contend that whether or not the doctor is a good or bad pathologist is not in issue, the question being whether the expelled physician's conduct was ethical.

The physician's attorney claims that the report was made for use by the widow as evidence in a judicial proceeding, and that as such it is in its entirety a privileged communication. Any rule or principle interfering with this privilege must be unenforceable as against public policy.

The trial court affirmed the decision of expulsion. On appeal, how would you decide?

*(Verdict on page 174a.)*





*...her fears of crowds and cancer  
ceased to worry her<sup>1</sup>*

*case report*

"40-year-old woman with overt anxiety symptoms . . . marked fear of crowds . . . phobic ideas concerning cancer. Tension, irritability, and tiredness were in evidence."



*medication:*

'Thorazine', 25 mg. orally, t.i.d.

*response:*

"Following ['Thorazine'] medication she became placid, composed and cheerful. When asked about her fears, she smiled and readily stated that they had ceased to worry her." She is now running her household for her husband and young son without difficulty.<sup>1</sup>

## THORAZINE<sup>\*</sup>

is available in ampuls, tablets and syrup (as the hydrochloride), and in suppositories (as the base).

*Smith, Kline & French Laboratories, Philadelphia*

<sup>\*</sup>T.M. Reg. U.S. Pat. Off. for chlorpromazine, S.K.F.

1. Silverman, M.: J. Ment. Sc. 101:640 (July) 1955.

**continuing benefits**  
in corticosteroid therapy

# METICORTELONE®

**rheumatoid arthritis:**

effective relief of pain, swelling, tenderness

**intractable asthma:**

relief of bronchospasm, dyspnea, cough; increases vital capacity

**collagen diseases and allergies:**

adequate hormone control with minimal electrolyte effects



# for steady maintenance **METICORTELONE®**

usually undisturbed by electrolyte side effects

- edema minimized
- potency enhanced
- liberal diet permitted

up to 5 times as potent as hydrocortisone



Tablets supplied in 3 strengths —

1 mg., 2.5 mg., 5 mg.

for convenient,  
individualized therapy

METICORTELONE,®  
brand of prednisolone.

ML-2-1646

*Schering*

What do you want  
in an analgesic?

**Percodan<sup>®</sup>\***

(Salts of Dihydrohydroxycodone and Homatropine, plus APC)

FOR PAIN

*Better than codeine plus APC<sup>1</sup>*

**speed**

acts faster than codeine plus APC—  
usually within 15 minutes<sup>1,2</sup>

**duration**

relieves pain longer than  
codeine plus APC—usually for 6 hours  
with virtual freedom from constipation<sup>1,2</sup>

Average adult dosage, 1 tablet q. 6 h. Supplied  
as scored, yellow oral tablets. May be habit-  
forming. Literature? Write—

**Endo<sup>®</sup>**

**ENDO LABORATORIES INC.** Richmond Hill 18, New York

1. Blank, P., and Boas, H.: Ann. West. Med. & Surg. 6:376, 1952.

2. Piper, C. E., and Nicklas, F. W.: Indust. Med. 23:510, 1954.

\*U.S. Pat. 2,628,185

highly successful . . .

- faster relief of pain,  
photophobia
- better control of inflammation,  
edema, allergy
- effective against common eye  
pathogens
- extremely well tolerated

now available

for inflammatory, allergic, infectious or traumatic  
eye conditions amenable to topical therapy—rapid,  
potent, topical Meti-steroid and anti-infective action

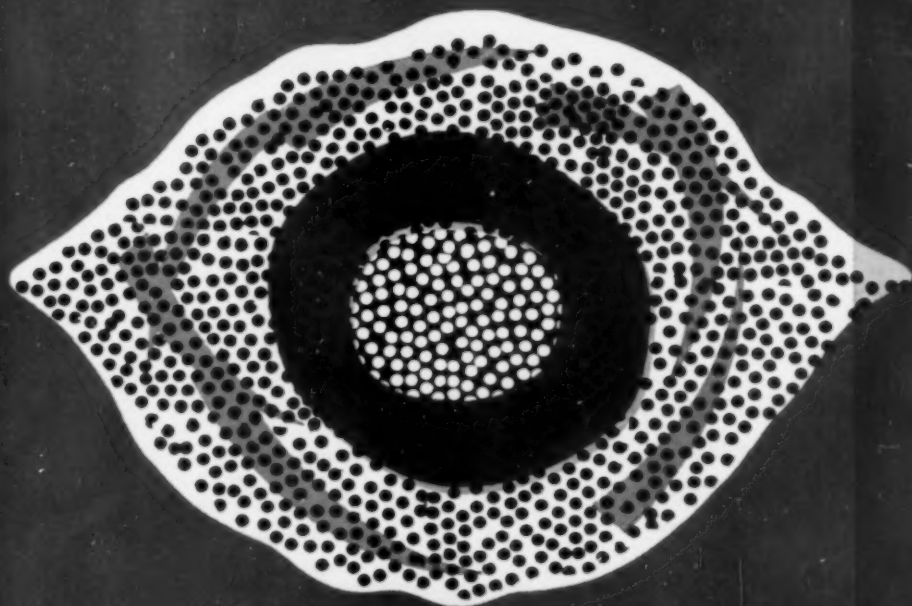
supplied: METIMYO Ophthalmic Suspension—Sterile; prednisolone acetate (METICORTELONE Acetate) 5 mg. per cc. (0.5%) suspended in an isotonic buffered and preserved solution of sulfacetamide sodium; 100 mg. per cc. (10%), 5 cc. dropper bottle. METIMYO Ointment with Neomycin: each gram contains 5 mg. prednisolone acetate (METICORTELONE Acetate), 100 mg. sulfacetamide sodium and 2.5 mg. neomycin sulfate (equivalent to 1.75 mg. neomycin base); ½ oz. tube, boxes of 1 and 12.

METIMYO,® brand of prednisolone acetate and sulfacetamide sodium.  
METICORTELONE,® brand of prednisolone.

© 1964

Pharm

.... in topical eye therapy



new

**METIMYD\***

(prednisolone acetate and sulfacetamide sodium)

Ophthalmic Suspension-Sterile

and

**METIMYD**

(prednisolone acetate and sulfacetamide sodium with neomycin sulfate)

Ointment with Neomycin

• antibacterial • antiallergic • anti-inflammatory

*Schering*

relaxes  
both mind  
and  
muscle

*for the average  
patient in  
everyday practice*

- well suited for prolonged therapy
  - well tolerated, nonaddictive, essentially nontoxic
- no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness
  - chemically unrelated to chlorpromazine or reserpine
  - does not produce significant depression
- orally effective within 30 minutes for a period of 6 hours

*Indications:* **anxiety and tension states, muscle spasm.**

THE ORIGINAL MEPROBAMATE  
**Miltown®**

*Tranquilizer with muscle-relaxant action*

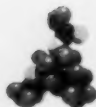
DISCOVERED AND INTRODUCED

BY **W** WALLACE LABORATORIES, New Brunswick, N. J.

2-methyl-5-n-propyl-1,3-propanediol dicarbamate—U.S. Patent 2,721,720

SUPPLIED: 400 mg. scored tablets. Usual dose: 1 or 2 tablets i.i.d.

*Literature and Samples Available on Request*



THE MILTOWN MOLECULE

CM-3708-R

# After Hours

Photographs with brief description of **your** hobby will be welcomed. A beautiful imported German apothecary jar will be sent to each contributor.

## "CAMELLIA MANOR"

For twenty years, I have taken great delight in gardening and horticulture as my hobby. Because I grow more vegetables than my family could possibly utilize, I give away as much as we use on our table. In addition to my outdoor gardening in the Spring and Summer, I also have a Winter garden.

My greatest gardening happiness, however, comes from growing Camellia Japo-

nica . . . to me, their beauty is unsurpassed in the plant world. I have about 100 plants, each about 12 feet high . . . and they become more valuable year by year. My home has come to be known as "Camellia Manor," as these beautiful flowers are to be seen almost everywhere!

C. C. HORTON, M.D.

Pendleton, S. C.



a  
distinguished  
record

**AUREO**



The pioneer among tetracyclines, AUREOMYCIN remains unsurpassed in anti-infective range, variety of application, effectiveness at low dosage.

# MYCIN\*

Hydrochloride  
Chlortetracycline HCl Lederle

Since its availability, more than a billion individual doses of AUREOMYCIN have been administered to patients throughout the world. Few therapeutic agents have been found as consistently effective against a wide group of diseases.

*A convenient dosage form for every medical requirement.*



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

\*REG. U. S. PAT. OFF.

## THE MEDICINAL USE OF PECTIN N.F.

### DESCRIPTION

PECTIN N.F. is a purified polygalacturonic acid methyl ester.

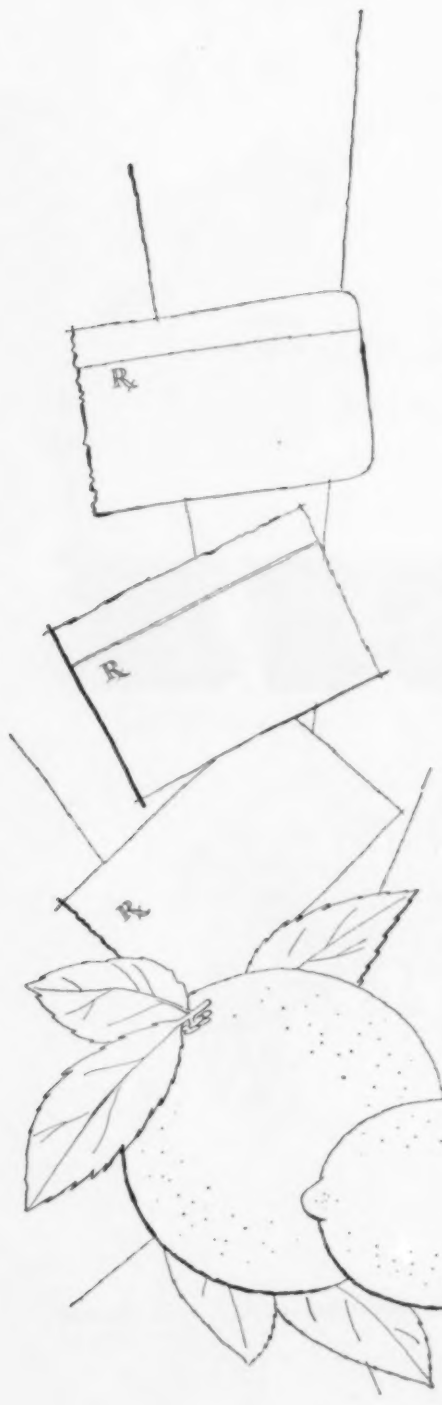
### USES

- 1) Orally in gastrointestinal disorders: particularly bacillary dysenteries and diarrheas.
- 2) In bulk laxative preparations.
- 3) In pastes and ointments: for healing of wounds, burns and external ulcers.
- 4) In emulsions: for medication and as a stabilizer.
- 5) Postoperative bleeding: oral, topical or parenteral.
- 6) Plasma extender: clinical investigation has placed Pectin Sols high on the list of plasma extenders.
- 7) Pectin test meals: reportedly do not increase pepsin or acid production or alter the emptying time of the stomach.
- 8) The detoxication mechanism of pectin and its derivative galacturonic acid reduces many reactions caused by therapeutic or toxic agents.

### AVAILABILITY

Exchange Brand Pectins and Pectin Derivatives are supplied to pharmaceutical manufacturers and are available through them to the medical profession as therapeutic ingredients in specialty products.

**Exchange** • PHARMACEUTICAL SALES



# Medical Teasers

A Challenging Crossword Puzzle for the Physician

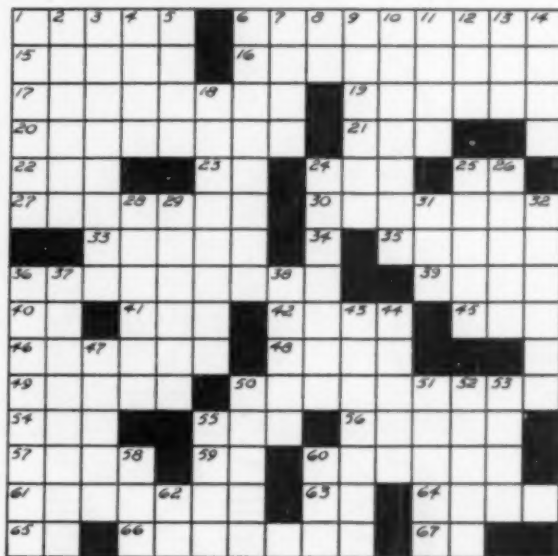
(Solution on page 141a)

## ACROSS

1. The Shinbone
6. Swollen (var.)
15. Acquire fresh vigor
16. Physical law, named for French chemist (2 wds.)
17. Fleet-footed huntress (Greek myth.)
19. Sugar-coated pill
20. Irritant in poison ivy
21. American women's organization (abbrev.)
22. Marble (Dial.)
23. Centimeter (abbrev.)
24. Posed
25. Parent
27. Tincture of monkshood
30. Sum of knowledge of muscles
33. Former Persian dynasty
34. Singular article
35. Round-up
36. Those who withstand
39. Varnish ingredient
40. Before noon
41. Initials, earliest American Explorer
42. State
45. Man's nickname
46. Behaviorism of Alcoholic
48. A sensation, preceding attack of epilepsy
49. Kind of capsule
50. Defective
54. Pitcher
55. \_\_\_\_\_Pinafore
56. Whinny
57. Robe of Office
59. Thren-tied sloth
60. Word element for "iron" or "steel"
61. Emerald Isle
63. Economic (abbr.)
64. Depend confidently
65. Not specified (abbr.)
66. Ascetic Jewish Brotherhood
67. Rare element, (chem. sym.)

## DOWN

1. Injury
2. Suffix, pert. to a physician
3. Extinct Blue Buck
4. Ailments
5. Hindu Nurse
6. Metazoan Cell
7. Twofold
8. Erbium (Symbol)
9. Noon
10. Apparatus for oxygenation
11. Former Ruler
12. Old Low German (abbr.)
13. Society of Automotive Engineers (abbr.)
14. Water vessel
18. Winks
24. Wreck, colloq.
25. Manner (Lat.)
26. Substance which causes a reaction
28. One who secures
29. Branch of Rhine River
31. Motion picture site
32. Milk product
36. Russian hypnotist
37. Sovereigns
38. Wanders
43. Theology of peace
44. Rowed
47. Scope
50. Ammonia compound
51. Aglow
52. Heron
53. Word element for bile
55. \_\_\_\_\_C. Anderson
58. Beverage
60. Perceive
62. Since



Contributed by Marjorie J. Sheldon

three-fold action against anxiety,  
stress and tension states with  
**NEURO-CENTRINE\***



**adds emotional  
to visceral tranquility**

More than an antispasmodic is needed for relief of spastic conditions of the gastrointestinal tract, associated with underlying anxiety, stress and tension.

NEURO-CENTRINE has a three-fold action against anxiety, stress and tension states. It combines:

1. Phenobarbital (15.0 mg.)—a tested sedative.
2. CENTRINE® (0.25 mg.)—an antispasmodic and anticholinergic with central action; atropine-like in action with minimal side effects.
3. Reserpine (0.05 mg.)—a well-known tranquilizer.

NEURO-CENTRINE is also recommended for the relief of symptoms associated with functional disorders of the gastrointestinal and cardiovascular system.

Descriptive literature on request.



\*Trademark

*more effective than one  
or two pints of tap water  
or salt solution*



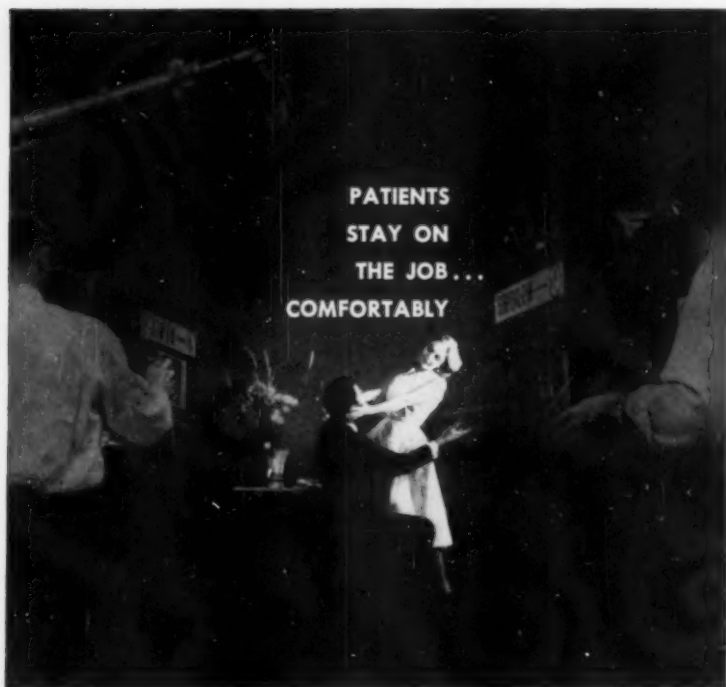
## **FLEET® ENEMA**

*Disposable Unit*

"Squeeze bottle" sized for easy one hand administration . . . distinctive rubber diaphragm controls flow, prevents leakage . . . correct length of rectal tube minimizes injury hazard . . . each unit contains, per 100 c.c., 16 gm. sodium biphosphate and 6 gm. sodium phosphate . . . an enema solution of Phospho-Soda (Fleet) . . . gentle, prompt, thorough . . . and less irritating than soap suds enemas.

*Established 1869*

**C. B. FLEET CO., INC., LYNCHBURG, VIRGINIA**  
Makers of Phospho® Soda (Fleet), a modern laxative of choice.



PATIENTS  
STAY ON  
THE JOB...  
COMFORTABLY

in URINARY DISTRESS

# Pyridium®

(Brand of Phenylazo-diamino-pyridine HCl)

*provides gratifying relief in a matter of minutes*

Painful symptoms impel the patient with acute or chronic pyelonephritis, cystitis, urethritis or prostatitis to seek your aid. In the interval before antibiotics, sulfonamides or other antibacterial measures can become effective, the nontoxic, compatible, analgesic action of PYRIDIUM brings prompt relief from urgency, frequency, dysuria, nocturia or spasm. At the same time, PYRIDIUM imparts an orange-red color to the urine which reassures the patient. Used alone or in combination with antibacterial agents, PYRIDIUM may be readily adjusted

to each patient by individualized dosage of the total therapy.

**SUPPLIED:** In 0.1 Gm. (1½ gr.) tablets in vials of 12 and bottles of 50, 500, and 1,000.

PYRIDIUM is the registered trade-mark of Nepera Chemical Co., Inc., for its brand of phenylazo-diamino-pyridine HCl. Sharp & Dohme, Division of Merck & Co., Inc., sole distributor in the United States.

**MERCK SHARP & DOHME**  
Philadelphia 1, Pa.  
Division of Merck & Co., Inc.



## Who Is This Doctor?

He was born August 17, 1878 in Dublin, Ireland. He is still living and is now an American citizen.

Educated at Stonyhurst and Trinity College, he won his medical degree at Dublin and set up practice in Dublin.

In his younger days, he piloted his own airplane, raced motorcycles and was addicted to archery.

He became a senator of the Irish Free State, served from 1922-1936. During the revolution that led the Irish to independence, W. B. Yeats recounts that this doctor "was captured by his enemies and imprisoned in a deserted house on the edge of the Liffey with every prospect of death. Pleading a natural necessity, he got into the garden, plunged under a shower of revolver bullets and as he swam the ice-cold December stream, promised it, should it land him to safety, two swans. I was present when he fulfilled that vow."

Though he is a surgeon and an eminent otolaryngologist, he is internationally known in the field of literature.

Yeats has termed him "one of the greatest lyric poets of our age." George Russell characterized him as having the "wildest wit in Ireland." Francis Hackett terms him "sensitive and savage, poet and ghoul, hero and knave." He appears in George Moore's *Salve* as "the author of limericks that are on the lips of all Dublin; James Joyce in *Ulysses* uses him as the original of "Buck Mulligan."

The titles of his books are interesting in themselves: *As I Was Going Down Sackville Street*, *Mourning Becomes Mrs. Spendlove*, *It Isn't This Time of Year at All*, *Start From Somewhere Else*, *Tumbling in the Hay*. His *Collected Poems* can be found in almost all public libraries.

*Can you name this doctor without turning to page 166a?*

# New

**CLINICAL EVIDENCE:**  
HYDROCORTISONE  
IN ACID MANTLE® BASE  
MORE EFFECTIVE  
IN SKIN THERAPY

# Exclusively in CORT-DOME™

"... The beneficial effects of Hydrocortisone appear to be enhanced by placing it in Acid Mantle Creme base, producing an acid preparation compatible with the normal pH of the skin. We have found that 1% Hydrocortisone in the above base is about as effective as 1% in most conditions treated. It has been particularly effective in atopic eczema of the skin..."

Lockwood, James H., Cmdr., MC, USN, U.S. Naval Hospital, San Diego, Cal.  
Bulletin of the Association of Military Dermatologists, June 1955, p. 2

**INDICATIONS** Pruritus Vulvae and Ani, Atopic Dermatitis, Dermatitis Venenata

**AVAILABLE** 3 strengths: 1/4%, 1%, 2% • CREME (jars) 1/4 oz., 1 oz., 2 oz., 4 oz., 16 oz. • LOTION (plastic squeeze bottles) 1/4 oz., 1 oz., 2 oz., 4 oz., 1 pint.

Creme or  
Lotion-DOME  
pH4.6



**DOME CHEMICALS INC.**  
109 WEST 64 STREET, NEW YORK 23, N. Y.



# Why Acid

The normal skin has an acid pH between 4 and 6. This acid mantle acts as a protective barrier.

When the skin is washed with soap or detergents, or is exposed to chemicals, solvents, et cetera, the protective acid mantle is removed.

This exposes the unprotected skin to contact irritants and pathogenic organisms. It results in a rise in the skin pH above 7, provides a fertile field for development of harmful bacteria and fungi, and may result in various types of dermatitis.

Dome Acid Mantle returns the skin to its normal acid pH in a matter of seconds and holds it for hours. Both the creme and lotion are greaseless, stainless.

for hand eczema?



**AVAILABLE**—Acid Mantle Creme pH4.2 in 1 oz. tubes, 4 oz. and 16 oz. jars. Acid Mantle Lotion pH4.5 in 4 oz. squeeze bottles and 16 oz. bottles.

THERE'S NO SUBSTITUTE FOR  
**Acid Mantle®**  
CREME or LOTION-DOME pH4.2

**DOME CHEMICALS INC.**  
109 W. 64 ST. NEW YORK 23, N. Y.



In Canada: Professional Sales Corp., 5333 Queen Mary Rd., Montreal, P. Q.

*Lift the depressed patient up to normal  
without fear of overstimulation . . .*

with new

# Ritalin®

A HAPPY MEDIUM  
IN PSYCHOMOTOR  
STIMULATION



• *Boosts the spirits, relieves physical fatigue and mental depression . . . yet has no appreciable effect on blood pressure, pulse rate or appetite.*

Ritalin is a mild, safer central-nervous-system stimulant which gently improves mood, relieves psychogenic fatigue "without let-down or jitters . . ." and counteracts over-sedation caused by barbiturates, tranquilizing agents and antihistamines.

Ritalin is not an amphetamine. Except in rare instances it does not produce jitteriness or depressive rebound, and has little or no effect on blood pressure, pulse rate or appetite.

Reference: I. Peacock, D. G.:  
Personal communication.

RITALIN® hydrochloride  
(methyl-phenylacetate  
hydrochloride CIBA)

*Average dosage: 10 mg.  
b.i.d. or t.i.d. Although  
individualization of  
dosage is always of para-  
mount importance, the  
high relative safety of  
Ritalin permits larger  
doses for greater  
effect if necessary.*

*Supplied: Tablets, 5 mg.  
(yellow) and 10 mg.  
(blue); bottles of 100,  
500 and 1000. Tablets,  
20 mg. (peach-colored);  
bottles of 100  
and 1000.*



*In a series of 120 patients with diverse complaints such as gas, bloating, nausea, cramps, etc. referable to the g.i. tract, Olson<sup>1</sup> obtained "rapid symptomatic relief" in 92 cases with COACTYN, a new pH-adjusted phosphorated carbohydrate solution containing homatropine methylbromide and phenobarbital.*

Significantly, in those cases which were functional in nature, the relief obtained was "more satisfactory than with usual antispasmodic or anticholinergic medications."

**AND**

"When Coactyn did not afford relief from symptoms, further diagnostic procedures in most instances revealed organic lesions of the g.i. tract."

**ABSTRACT OF CASE REPORT**

A 42-year-old white female complained of severe gas and bloating after eating "almost anything." She had had a cholecystectomy. Abdominal distention was so marked as to raise the question of pregnancy. Cramping became so severe that parenteral anticholinergics were sometimes required, with but partial relief. A g.i. series revealed only hypermotility and spasticity of the entire g.i. tract. Among the drugs which had been tried were estrogens, sedatives, almost all of the available antispasmodics, and numerous alkaline buffering agents. None gave satisfactory relief. Administration of COACTYN resulted in "almost complete alleviation of symptoms." The patient was able to tolerate a better balanced diet. The author calls attention to the "topical" antispasmodic effect of the pH-adjusted phosphorated carbohydrate solution.

**FORMULA:**

Each teaspoonful contains 0.5 mg. homatropine methylbromide and 8 mg. phenobarbital in a phosphorated carbohydrate solution with the pH of the entire preparation adjusted at an optimally effective level. Alcohol 9.5%. Pleasantly apricot-flavored.

**DOSAGE:**

1 or 2 teaspoonfuls, undiluted, 15 minutes before meals; additional doses if necessary.

**SUPPLIED:**

Bottles of 3 fl.oz. and 16 fl.oz.

1. Olson, J. A.: *Am. J. Digest. Dis.*, Nov., 1955.



**NEW...**

a faster-acting  
more effective  
spasmolytic

**Coactyn<sup>®</sup>**

*Kinney<sup>®</sup>*

KINNEY & COMPANY, INC.

Columbus, Indiana



new

**LIPO GANTRISIN**

*Only two doses a day  
for round-the-clock  
effect*

When you prescribe  
Lipo Gantrisin, your  
patients usually need  
only two doses daily,  
for the antibacterial  
action of a single  
dose lasts for twelve

**'Roche'**

hours. Lipo Gantrisin  
'Roche' is a palatable  
liquid especially  
useful for children  
and elderly invalids.

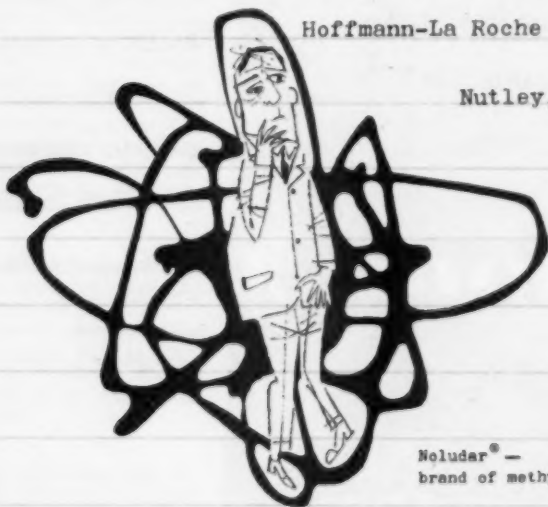
Lipo Gantrisin® Acetyl  
—brand of acetyl  
sulfisoxazole in  
vegetable oil emulsion

# For patients wound up in a tangle of nerves—

Noludar 'Roche' provides relaxation.  
Not a barbiturate, not habit forming,  
50 mg t.i.d. brings daytime sedation  
without undue drowsiness, while 200  
mg h.s. usually induces a restful  
night's sleep with a clear-headed  
awakening. Noludar tablets, 50 and  
200 mg; elixir, 50 mg per teaspoonful.

Hoffmann-La Roche Inc.,

Nutley, N.J.



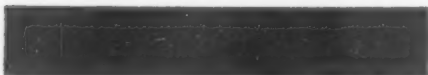
Noludar® —  
brand of methyprylon



*Symptomatic  
relief...plus!*

# Achrocidin<sup>\*</sup>

Tetracycline-Antihistamine-Analgesic Compound



*Available on prescription only*

ACHROCIDIN is a well-balanced, comprehensive formula directly modifying the complications of the common cold or upper respiratory infections.

In addition to the direct benefit of rapid symptomatic improvement, ACHROCIDIN promptly controls the bacterial component frequently responsible for the development in susceptible individuals of sequelae such as otitis media, sinusitis, adenitis, and bronchitis.

ACHROCIDIN is convenient for you to prescribe—easy for the patient to take. Average adult dose: two tablets three or four times daily.

ACHROMYCIN® Tetracycline 125 mg.  
Phenacetin . . . . . 120 mg.  
Caffeine . . . . . 30 mg.  
Salicylamide . . . . . 150 mg.  
Chlorothen Citrate . . . . . 25 mg.  
Bottle of 24 tablets.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK  
®TRADEMARK



# LETTERS TO THE EDITOR

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This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers, who are invited to comment on controversial subjects, names will be omitted when requested.

## Jurisprudence Articles

Just a line to say that your Medical Jurisprudence articles are much appreciated. They are a great help to the GP, who encounters all kinds of cases in the greatest variety of circumstances. If a

doctor isn't careful, he can, in complete innocence, get involved in many an unpleasant situation. These articles help to keep us up on the legal aspect of doctor-patient relationship.

B.A.R., M.D.  
New Orleans, La.

## Likes MT

It is with great pleasure and enjoyment that I read your monthly articles. I find them very complete, up to the minute, and concise.

Your refresher articles are excellent and keep the busy GP abreast of new developments in diagnosis and treatment.

"Off the Record" and the crossword puzzle provide a few moments of relaxation in a busy day.

O.M.E., M.D.  
Los Angeles, Calif.



**IF SHE NEEDS IRON—**  
*and most prenatal patients do, give it as*

### **CALFERBEE (Smith)**

Iron as ferrous sulfate exsiccated—tribasic calcium phosphate—essential vitamins

### **CALFERBEE LACTATE (Smith)** phosphorus free

Iron as ferrous sulfate exsiccated—calcium lactate—dried aluminum hydroxide gel—essential vitamins

Tablets are easy to swallow, coated to prevent rapid disintegration in the stomach, therefore well tolerated. Economical, too. Choose the one which supplies calcium in the form you prefer.

**CARROLL DUNHAM SMITH PHARMACAL CO.**  
NEW BRUNSWICK, N. J.



## WITHOUT DISTURBING MENTAL ACUITY

**ATARAXIC  
IN LIQUID FORM  
PROMPT-ACTING  
GOOD-TASTING**



**ATARAX SYRUP**



Chicago 11, Illinois

**FAST**—begins to induce "peace of mind" within 15 minutes.<sup>1</sup>

**EFFECTIVE**—approximately 90% clinical response in anxiety and tension states.<sup>1, 2, 3</sup>

**WELL-TOLERATED**—virtually no side effects are reported. No toxic action on liver, blood or brain.<sup>1, 2, 3</sup>

**DOSAGE:** Adults, usually one 25 mg. tablet or two tsp. Syrup, t.i.d. Children, usually one 10 mg. tablet or one tsp. Syrup, once or twice daily. Adjust as needed.

**SUPPLIED:** In tiny 25 mg. (green) tablets, and 10 mg. (orange) tablets, bottles of 100. ATARAX Syrup in pint bottles, containing 2 mg. ATARAX per cc.

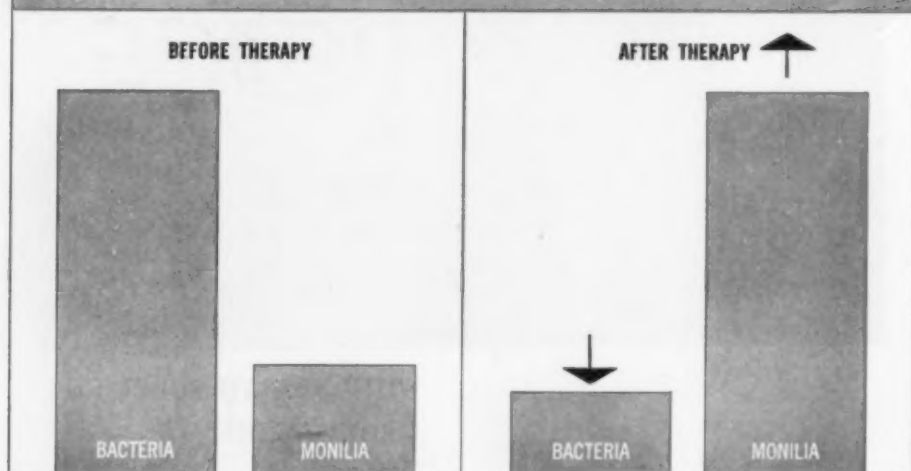
**References.** 1. Farah, Luis: *Int. Rec. of Med. & Gen. Prac. Clin.* 169:379 (June) 1956. 2. Shalowitz, M.: *Geriatrics*, July, 1956. 3. Robinson, H. M. et al: *J.A.M.A.* 161:604 (June 16) 1956.

## COMMON THERAPEUTIC PROBLEM:



*the "see-saw" antimicrobial effect  
of broad spectrum antibiotics*

### RESPONSE OF INTESTINAL FLORA TO BROAD SPECTRUM ANTIBIOTICS ALONE (Schematic)



**SQUIBB**



*Squibb Quality—  
the Priceless Ingredient*

**Mysteclin Capsules**—Containing 250 mg. Steclin (Squibb Tetracycline) Hydrochloride and 250,000 units Mycostatin (Squibb Nystatin). Bottles of 16 and 100.

**Mysteclin Half Strength Capsules**—Containing 125 mg. Steclin (Squibb Tetracycline) Hydrochloride and 125,000 units Mycostatin (Squibb Nystatin). Bottles of 16 and 100.

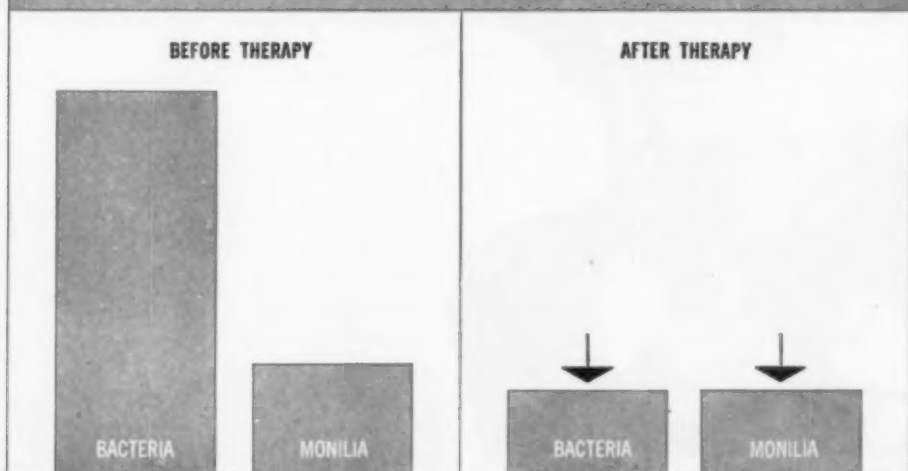
**NEW . . . Mysteclin Suspension**—Containing the equivalent of 125 mg. Steclin (Squibb Tetracycline) Hydrochloride and 125,000 units Mycostatin (Squibb Nystatin) per 5 cc. teaspoonful. Bottles of 2 ounces.

\*"MYSTECLIN", "STECLIN" AND "MYCOSTATIN" ARE SQUIBB TRADEMARKS



**NOW...** *balanced antimicrobial therapy*

**RESPONSE OF INTESTINAL FLORA TO MYSTECLIN**  
(Schematic)



# MYSTECLIN

**Stecilin-Mycoostatin**

**(Squibb Tetracycline-Nystatin)**

*the only broad spectrum antibiotic preparation with  
added protection against monilial superinfection*

# BREATHING a n d BALANCE



in bronchial asthma

# Sterane<sup>®</sup>

brand of prednisolone

whenever corticosteroids  
are indicated

Supplied: White, 5 mg. oral tablets, bottles of 20 and 100. Pink, 1 mg. oral tablets, bottles of 100. Both are deep-scored.

\*Schwartz, E.: New York J. Med. 56:570, 1956.

**provides restoration of breathing capacity** — Relief of symptoms [bronchospasm, cough, wheezing, dyspnea] is maintained for long periods with relatively small doses.\*

**minimal effect on electrolyte balance** — "in therapeutically effective doses... there is usually no sodium or fluid retention or potassium loss."\* Lack of edema and undesirable weight gain permits more effective therapy particularly for those with cardiac complications.

**PFIZER LABORATORIES**, Brooklyn 6, New York  
Division, Chas. Pfizer & Co., Inc.



## Mediquiz

*These questions are from a civil service examination recently given to candidates for physician appointments in municipal government.*

*Like to see how you would fare? Answers will be found on page 164a.*

1. In primary atypical (presumably viral) pneumonia the one of the following blood findings that is common is: (A) leucocytosis; (B) agglutination of sheep's red cells by the patient's blood serum; (C) cold agglutinins in the serum; (D) secondary anemia.

2. In simple acute tuberculous pleurisy with effusion, the one of the following findings which is characteristic upon physical examination is: (A) bronchophony; (B) increase of vocal fremitus; (C) egophony; (D) succession splash.

3. In a patient who has retrosternal pain and is found to have acute swelling with crepitus of the soft tissues above the clavicle, the one of the following which is the probable diagnosis is: (A) retropharyngeal abscess; (B) rupture of the pericardium; (C) mediastinal emphysema; (D) ruptured gastric ulcer.

4. In acute diaphragmatic pleurisy involving the central part of the diaphragm, the patient is likely to complain of pain in: (A) neck and shoulder; (B) lateral part of the chest be-

tween the third and sixth ribs; (C) center of the chest between the second and fifth ribs; (D) interscapular region.

5. In acute tuberculous lobar pneumonia the finding which is typical is: (A) blood leucocytes below 4,000; (B) blood leucocytes between 4,000 and 10,000; (C) blood leucocytes between 10,000 and 20,000; (D) blood leucocytes above 20,000.

6. The one of the following diseases involving the joints, of which subcutaneous nodules are characteristic is: (A) gonorrheal arthritis; (B) osteoarthritis; (C) rheumatic fever; (D) tubercular arthritis.

7. A 26 year old male has complained for the past three weeks of epigastric pain two to three hours after meals. He is relieved of pain by food and alkalis but has pain during the night. For the past week he has been vomiting, chiefly at night. Gastro-intestinal x-ray series reveal a small ulcer niche at the pylorus with considerable five-hour and some twenty-four hour gastric retention. The preferred initial treatment is a: (A)

—Concluded on page 63a

# NEW

ATARAXOID is a unique, new combination of STERANE and ATARAX, which now permits simultaneous symptomatic control and reduction of attendant anxiety and apprehension in rheumatoid arthritis and other indications.

The added tranquilizer control, desirably easing mental stress, also directly assists clinical progress. It minimizes the chance of exacerbation related to emotional strain and facilitates patient confidence and cooperation in the therapeutic program toward maximum rehabilitation.

ATARAXOID exerts the anti-rheumatic, anti-inflammatory activity of STERANE distinctly superior to previous steroids, effective in radically reduced dosage, and with minimal disturbance of electrolyte and fluid metabolism.

The ataractic effect is a central neuro-relaxing action — the result of a marked cerebral specificity — free of mental fogging and devoid of any major complications: no liver, blood or brain damage. This peace-of-mind component is also used in the lowest dosage range.

Supplied: Each green, scored, ATARAXOID oral tablet contains 5 mg. prednisolone (STERANE) and 10 mg. hydroxyzine hydrochloride (ATARAX). Bottles of 30 and 100.

PFIZER LABORATORIES  
Division, Chas. Pfizer & Co., Inc.  
Brooklyn 8, New York

# At



the first  
and only  
ataraxic-corticoid

# araxoid\*

prednisolone and hydroxyzine

combining the newest,  
safest tranquilizer,

ATARAX®



the newest, most  
effective steroid,

STERANE®  
(prednisolone)



*simultaneously* controls  
the symptoms and the  
apprehension

In Rheumatoid Arthritis,  
other collagen diseases,  
bronchial asthma and  
inflammatory dermatoses

\*Trademark

BARD-PARKER  
presents a *New* concentrate  
**HALIMIDE**



... A COMPLIMENT TO  
ANY INSTRUMENT

BARD-PARKER presents HALIMIDE, a *new* concentrate of low surface tension and excellent penetrating qualities, scientifically perfected for *inexpensive* instrument disinfection.

**HALIMIDE is...**

**RAPIDLY BACTERICIDAL  
NON-SELECTIVE  
TUBERCULOCIDAL WHEN DILUTED WITH ALCOHOL**

**NON-CORROSIVE—NO ANTI-RUST TABLETS TO ADD  
STABLE—NEED NOT BE CHANGED FREQUENTLY  
INEXPENSIVE—1 oz. makes 1 gal. of solution**

**LIST PRICE—4 oz. bottle ... \$2.50**  
Please see your Dealer for quantity discounts

**PARKER, WHITE & HEYL, INC.**  
Danbury, Connecticut

**HALIMIDE and your INSTRUMENTS...THEY COMPLIMENT EACH OTHER**



**A SMILE AGAIN IN JUST 12 DAYS WITH TIME-SAVING TRIVA**

*the MODERN treatment for all 3 types of vaginitis*

TRIVA effectively annihilates vaginal microorganisms, restores mucosal integrity and accelerates healing for rapid recovery.

Non-irritant, non-toxic, non-staining, TRIVA is a safe vaginal douche... even during pregnancy. Effective in any pH medium. Most cases of trichomonal, monilial and non-specific vaginitis become asymptomatic and organism free in 6 to 12 days. For complete data see Physicians' Desk Reference, 1956, page 427.

AVAILABLE AT ALL PHARMACIES, in convenient packages of 24 individual 3 Gm. packets, each containing 35% Alkyl Aryl sulfonate, (surface-active, germicidal and detergent), 0.33% Disodium ethylene bis-iminodiacetate (chelating agent), 53% Sodium sulfate, 2% Oxyquinoline sulfate (bactericide, protozoacide) and 9.67% dispersant.

*Full treatment package and literature on request.*

**BOYLE**

BOYLE & COMPANY • Bell Gardens, California



# "Bon Appetit"

## for the Geriatric Convalescent Anorexic Patient



Few substances compare with wine in its record of continuous use as an appetite stimulant, as a pleasant, nutritious adjuvant to the diet, and as a gentle medicinal agent.

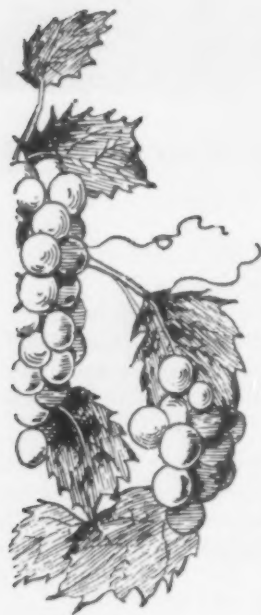
Notably in the dietetic management of the aged, the convalescent and the post-surgical patient, wine has occupied a foremost position for generations—but it is only of recent times that its distinctive physiologic values and clinical rationale have been systematically studied and evaluated.

Thus it is now known that—

- wine stimulates olfactory acuity—markedly increasing appetite in anorexia
- wine serves as a quick-energy food. Its small amount of hexose is speedily absorbed and its moderate content of alcohol is metabolized readily even by diabetics
- wine possesses significant vasodilating, diuretic and relaxing properties of value in the field of cardiology
- a little Port or Sherry at bedtime is a valuable relaxant to the insomniac and may obviate the need for sedative medication

And wine can help brighten the often unappealing character of special or restricted dietaries—a psychological boost of inestimable value to the debilitated and depressed patient.

These and other research data of clinical interest are contained in the brochure "Uses of Wine in Medical Practice." A copy is available to you by writing: Wine Advisory Board, 717 Market Street, San Francisco, California.



transthoracic vagotomy; (B) posterior gastro-enterostomy; (C) gastric resection and gastro-jejunostomy; (D) medical regimen consisting of decompression of stomach at night and a modified form of "stenosis diet."

8. A suspected obstructing lesion of the descending colon is best visualized by: (A) plain prone film of the abdomen; (B) a gastro-intestinal series; (C) sigmoidoscopy; (D) barium enema.

9. In a gastro-intestinal x-ray series an enlargement of the duodenal sweep with displacement downward and to the right is often significant of: (A) anomalous position of the stomach; (B) tumor of head of pancreas; (C) partial obstruction of jejunum; (D) enlargement of the left lobe of the liver.

10. Radioactive phosphorus has been found useful in the treatment of certain diseases. The one of the following diseases in which it is of no use is: (A) acute myelogenous leukemia; (B) chronic myelogenous leukemia; (C) chronic lymphatic leukemia; (D) polycythemia vera.

11. BAL (British Anti-Lewisite) is used to counteract the toxic effects of: (A) atropine; (B) mercury; (C) morphine; (D) barbiturates.

12. A 57 year old patient presents the following symptoms: for several months he had noticed weakness, sore tongue, acroparesthesia and diarrhea. Examination reveals pallor, absence of position and vibration sensation in the feet and an atrophic tongue. Blood count shows a macrocytic anemia. The one of the following which will cause the best re-

sponse of reticulocytosis is: (A) folic acid 20 mgm daily; (B) ferrous sulphate 2 g daily; (C) thiamin chloride 100 mgm daily; (D) transfusion of whole blood 500 cc daily.

13. Charcot triad consists of: (A) nystagmus, scanning speech, intention tremor; (B) dysarthria, dysphagia, acroparesthesias; (C) paraplegia, vesical difficulty, amblyopia; (D) pain, temperature dissociation, weakness, hyperactive reflexes.

14. A patient has a history of hay fever beginning each year about August 15th. Skin tests show he is equally sensitive to giant ragweed, oak pollen, timothy. A course of treatment is planned with antigens. The one of the following courses which is most accepted is a course of: (A) ragweed alone; (B) oak alone; (C) timothy alone; (D) the three in combination.

15. The one of the following findings which would most likely be associated with chronic alcoholism is: (A) bilateral wrist drop; (B) bilateral foot drop; (C) a combination of A and B; (D) unilateral foot drop.

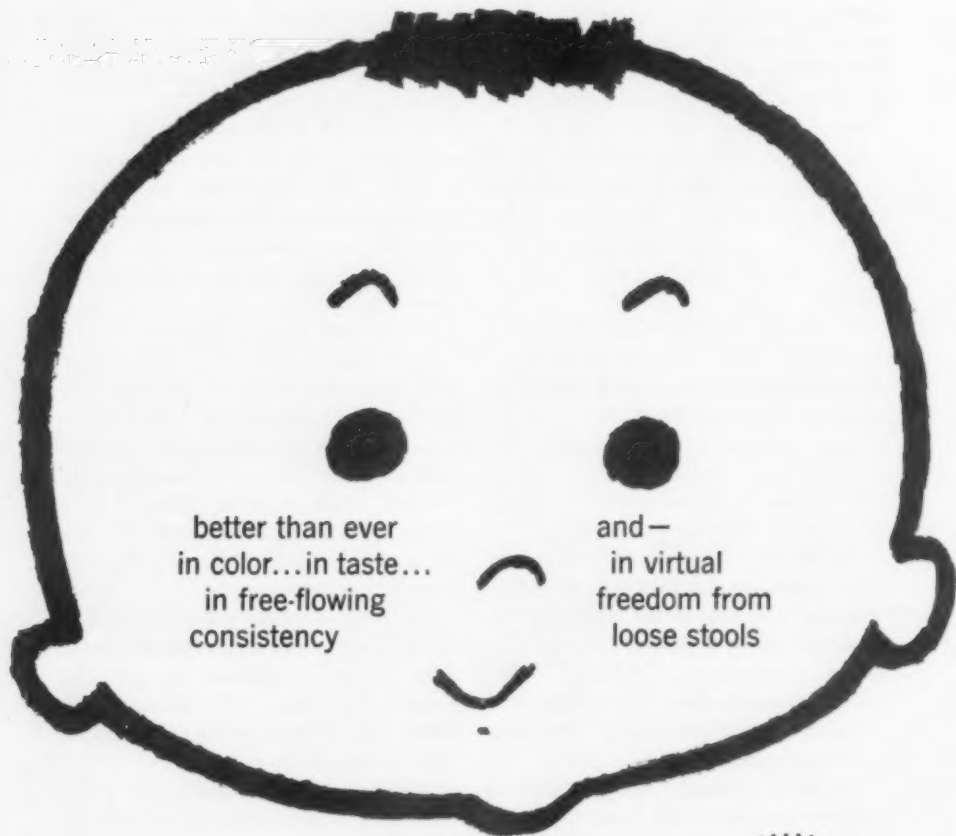
16. The average duration of action of a dose of protamine zinc insulin is: (A) one-half hour to one hour; (B) four to six hours; (C) twenty to twenty-four hours; (D) twelve to sixteen hours.

17. The majority of cases of obesity in adults are due to: (A) overeating (exogenous) as to total caloric needs; (B) thyroid deficiency; (C) pituitary deficiency; (D) excess carbohydrate ingestion without excessive caloric intake.

(Answers on page 164a)

*after 20 successful years  
raising milk-allergic children...*

*better than ever*



better than ever  
in color...in taste...  
in free-flowing  
consistency

and—  
in virtual  
freedom from  
loose stools

## MULL-SOY<sup>®</sup>

Liquid

TODAY

The up-to-date hypoallergenic soy alternative of choice replacing whole or evaporated cow's milk in *any* formula whenever cow's milk allergy is encountered or anticipated.

Available in 15½-fl.oz. tins. Start with 1:3 dilution with water, strengthen gradually to 1:1. Add carbohydrate and vitamins as required, at your discretion. Also available: MULL-SOY Powdered in 1-lb. tins at all drug outlets.

**Borden's** PRESCRIPTION PRODUCTS DIVISION  
350 Madison Avenue, New York 17





**5 way effectiveness with**

**trichotine\***

**In vulvovaginal therapy**

1. *Trichotine is a detergent*
2. *Trichotine is a bactericide and fungicide*
3. *Trichotine is an aid to epithelization*
4. *Trichotine is an antipruritic*
5. *Trichotine is an aesthetic and psychosomatic adjunct*

Trichotine—more than a decade ago—pioneered in incorporating the multiple advantages of sodium lauryl sulfate with the recognized values of other specific or adjunctive agents for vulvovaginal therapy.

Trichotine douches may be prescribed as often as required—excellent for postcoital or postmenopausal hygiene—concentrated solutions useful for office clean-up or swab treatments. Acts quickly, safely, thoroughly.

*Indications:*

Non-specific vaginitis and leukorrhea, subacute and chronic cervicitis, senile vaginitis, pruritus vulvae, trichomoniasis, moniliasis.

*\*Reg. U. S. Pat. Off.*

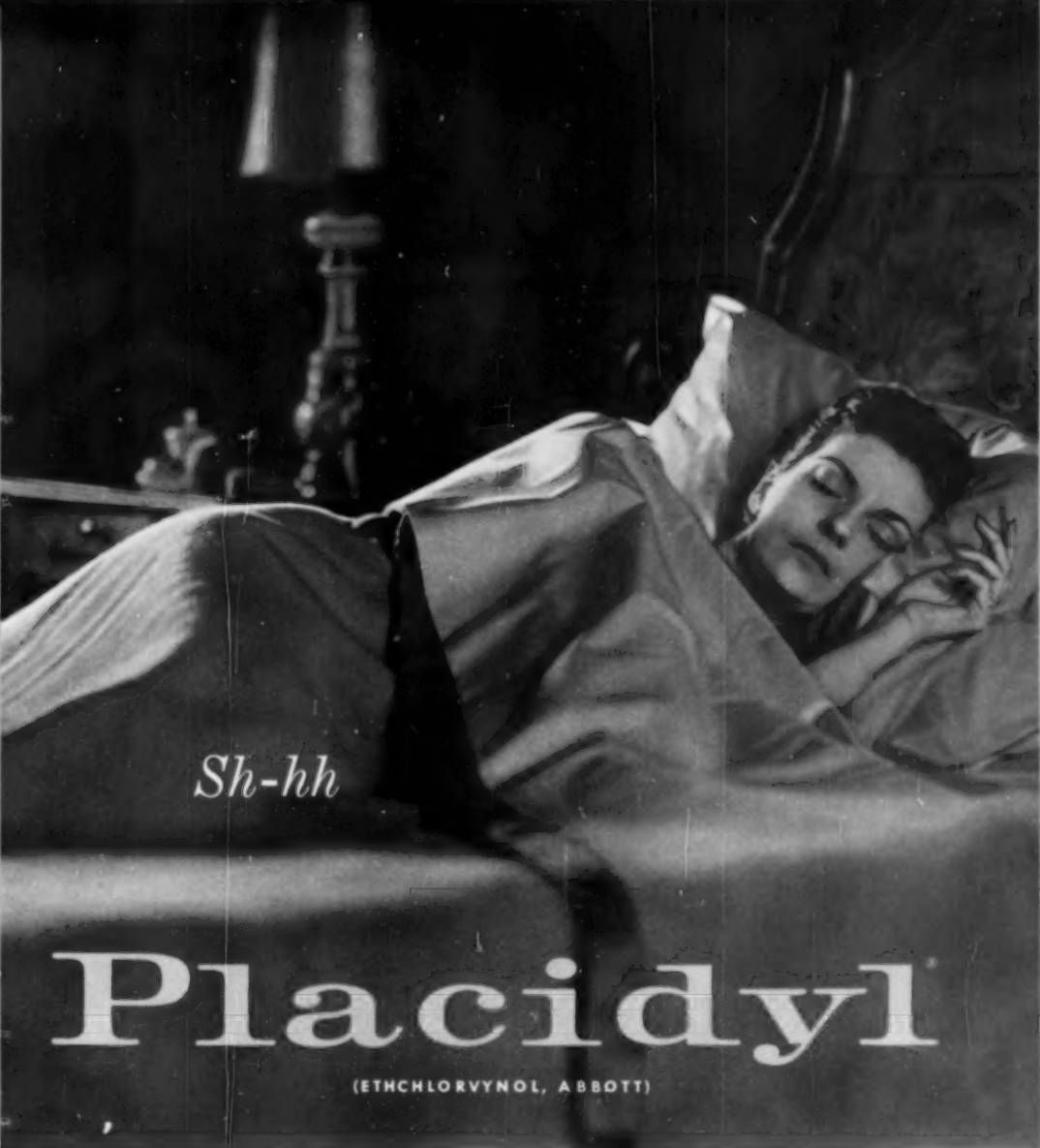
The Trichotine formula contains sodium lauryl sulfate, sodium perborate, sodium borate, thymol, eucalyptol, menthol, and methyl salicylate.

*Samples and literature on request / Full details in P D R  
Available in jars of 5, 12, and 20 oz.*

**the lesler co., inc.** 375 Fairfield Ave., Stamford, Conn.



"The only significant evidence, Mrs. Weber, is a rather large mouth!"



*Sh-hh*

# Placidyl

(ETHCHLORVYNOL, ABBOTT)

*nudges your patient to sleep*  
.....

Nonbarbiturate. Gently calms the nervous insomnia patient, bringing tranquil sleep in 15-30 minutes. Wears off in about 5 hours, so patient normally awakens next day free of hangover. *Abbott*

prompt

relief

## Selsun®

**quickest way to relieve the itching, scaling,  
burning of seborrheic dermatitis and dandruff.**

The first few Selsun applications control symptoms —then each application keeps the scalp healthy up to four weeks. Effective in 81-87% of seborrheic dermatitis, 92-95% of dandruff cases. And Selsun is as simple to use as a shampoo. Sold only on prescription, Selsun Suspension comes in 4-fluidounce plastic bottles.

Abbott

**a penetrant emulsion  
for chronic  
constipation**

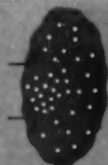
**KONDREMUL** <sup>®</sup> (PLAIN)

COLLOIDAL EMULSION OF MINERAL OIL AND IRISH MOSS

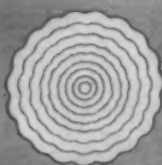
permeates the hard, stubborn stool of chronic  
constipation with millions of microscopic  
oil droplets, each encased in a film of Irish moss...  
makes it more movable



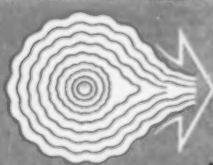
penetrates



softens



"bulks it up"



makes it more movable

**KONDREMUL (Plain)**—Pleasant-tasting and  
non-habit-forming. Contains 55% mineral oil.  
Supplied in bottles of 1 pt.

**KONDREMUL (With Cascara)**—0.66 Gm. nonbitter  
Ext. Cascara per tablespoon. Bottles of 14 fl.oz.

**KONDREMUL (With Phenolphthalein)**—0.13 Gm.  
phenolphthalein (2.2 gr.) per tablespoon. Bottles of 1 pt.

When taken as directed before retiring, KONDREMUL  
does not interfere with absorption of essential nutrients.

**THE E. L. PATCH CO. — STONEHAM, MASSACHUSETTS**

**KONDREMUL**

**PATCH**

ESPECIALLY FOR CHILDREN

the high-blood-level sulfonamide  
with the low-risk factor

# Elkosin

(sulfisomidine CIBA)

IN RESPIRATORY INFECTIONS Elkosin has the advantage of rapidly building and maintaining therapeutic blood levels. While Elkosin offers full sulfonamide effects, it is so low in toxicity as to virtually preclude renal or hematopoietic damage.

2/28/62M

## SYRUP

*Suspension in Syrup* (strawberry-flavored), 0.25 Gm. per 4-ml. teaspoon; pints.

## TABLETS

*Tablets*, 0.5 Gm. (white, double-scored); bottles of 100, 500 and 1000.

C I B A SUMMIT, N. J.

# MODERN MEDICINALS

These brief resumes of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards and a record kept. This file can be kept by the physician for ready reference.

**Acogesic**, R. J. Strassenburgh Co., Rochester 14, New York. A capsule containing phenyltoloxamine dihydrogen citrate 25 mg.; acetyl-p-aminophenol 300 mg.; salicylamide 200 mg.; raphetamine 2 mg.; and metopine 0.5 mg. Provides analgesic and antihistaminic action for routine pain problems such as headache, arthritis, etc. **Dose:** One to two capsules every 3 or 4 hours. **Sup:** Bottles of 100.

**Ataraxoid**, Pfizer Laboratories, Division of Chas. Pfizer & Co., Brooklyn 6, New York. A green, scored tablet containing prednisolone 5 mg. and Atarax 10 mg. Indicated as an antirheumatic, antiallergic tranquilizer. **Dose:** As directed by physician. **Sup:** Bottles of 30 and 100.

**Butiserpine Repeat Action Tablets**, McNeil Laboratories, Inc., Philadelphia 32, Pennsylvania. A repeat action tablet containing Butisol Sodium and reserpine. Indicated in the treatment of mild to moderate essential hypertension and as a mild sedative-tranquilizer in conditions such as coronary occlusion, angina pectoris, anxiety neuroses, etc. **Dose:** One tablet in the morning provides sedative, antihypertensive action for the working day. **Sup:** Bottles of 50.

**Cantil**, Lakeside Laboratories, Inc., Milwaukee 1, Wisconsin. A brand of N-methyl-3-piperidyl-diphenylglycolate methobromide. An anticholinergic specifically for the colon (ulcerative colitis, irritable colon, spastic colitis, diverticulitis and other colon disorders). **Dose:** Four to eight tablets daily. **Sup:** Cantil plain 25 mg. — scored tablets, bottles of 100. Cantil with phenobarbital (25 mg. Cantil, 16 mg. phenobarbital) — scored tablets, bottles of 100.

**Cathocillin**, Merck Sharp & Dohme, Division of Merck & Co., Inc., Philadelphia 1, Pennsylvania. A capsule containing 75 mg. potassium penicillin G and 125 mg. Cathomycin. The combination is said to offer advantages of both drugs while eliminating gaps in coverage by either antibiotic alone. Indicated in a variety of infectious conditions. **Dose:** As directed by physician. **Sup:** Bottles of 16.

**Cholan V Tablets**, Maltbie Laboratories, Division of Wallace & Tiernan, Inc., Belleville 9, New Jersey. Contain homatropine methylbromide 5 mg. and dehydrocholic acid 250 mg. Indicated in the treatment of biliary

—Continued on page 74a

# Hydrogen Peroxide in its Physiologically Correct and Effective Form

**G.H.P.**

G.H.P. Carbamide is hydrogen peroxide in its stable, physiologically correct and effective form. It represents a scientifically sound advance over the familiar aqueous solution of hydrogen peroxide, overcoming the limitations of the latter product. It is a long-acting, safe, non-aqueous and hygroscopic solution. In the presence of tissue catalase or peroxidase, it releases active oxygen over a prolonged period and holds it in contact with infected tissues—differing notably in this respect from aqueous hydrogen peroxide where the action is transient. G.H.P. Carbamide is a hypo-allergenic, wide-spectrum bactericide and fungicide; it also has excellent cleansing and deodorizing properties. G.H.P. Carbamide is an economical and effective medicament in the treatment of purulent infections. Used full strength, you may expect rapid recovery from such conditions as chronic Otitis Media and moist Otitis Externa. G.H.P. Carbamide will soften and ease the removal of impacted wax-like cerumen. Apply undiluted topically or as a wet dressing to ulcerated and moist bacterial skin infections, wounds and abrasions. When diluted with two parts of water, it may be used in the treatment of oral infections or as a lavage or instilled into body cavities.

**FORMULA:** G. H. P. Carbamide contains:

Urea (Carbamide) Peroxide.....4%  
8-Hydroxyquinoline .....0.1%  
Anhydrous Glycerol .....q.s. ad.

**SUPPLIED:**

Bottles—1 oz. with dropper  
Bottles—8 oz.

Samples and literature upon request. *Write*

TO  
→

**INTERNATIONAL**

**PHARMACEUTICAL CORP.**

**1700 Walnut Street Philadelphia 3, Pa.**





*in 1.8 minutes, doctor,  
you can check the record of*

## Revlon Silicare®

**In the Treatment of Hand Dermatitis**

Revlon research scientists developed Silicare specifically to counteract skin exposure to irritants and to provide desired prophylactic functions.

LeVan and associates\* tabulated the results of 147 cases of hand dermatitis after treatment with Silicare for several months.



	No. of patients	complete healing	partial healing	no healing
Housewife	38	33	3	2
Kitchen employee	21	18	3	—
Profession housecleaner	19	15	3	1
Laundry worker	13	12	1	—
Nurse and aide	23	17	5	1
Seamstress	3	1	2	—
Laboratory technician	4	3	1	—
Miscellaneous	26	22	3	1
	147	121	21	5

You can safely recommend Silicare as it helps heal and protect the hands from further irritation despite continued exposure to the same causative agents. The acceptance of Silicare is further enhanced by its smooth, non-greasy consistency and its pleasant fragrance.

In practice, doctor, where your own hands are subjected to frequent scrubbing, you will find that Silicare gives the desired protection yet leaves no sticky film to impair your manual dexterity.



*Silicare Formula*  
Silicone — water repellent  
Hexachlorophene — bactericide  
Camphor-Menthol — antipruritic  
Glyoxyl — diuretic — healing agent

**Revlon**

\*LeVan, P., Sternberg, T. H. & Newcomer, V. D. California Medicine 81:210, 1954

PHARMACAL DIVISION • 745 Fifth Avenue • New York 22, N. Y.

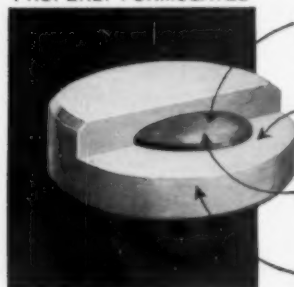
**NEW**

**For Pain-Free**  
*of everyday*  
**In "Rheumatism"**\*

**M**ultiple  
**TEMP**

*combine:*

THE PROPER FORMULA  
 PROPERLY FORMULATED



*Physical separation of the steroid component from the aluminum hydroxide as provided by the Multiple Compressed Tablet construction assures full potency and stability of prednisolone.*

**PREDNISOLONE** (1 mg.) ....  
 +  
**ASPIRIN** (0.3 Gm.) .....  
 +  
**ASCORBIC ACID** (50 mg.) ..  
 +  
**ANTACID** (0.2 Gm.) .....

\* Early rheumatoid arthritis  
 Rheumatoid spondylitis  
 Osteoarthritis  
 Still's disease  
 Psoriatic arthritis  
 Bursitis

Synovitis  
 Tenosynovitis  
 Myositis  
 Fibrositis  
 Neuritis

**Performance**  
*activities*

**Patients**



**Compressed Tablets**

**OGEN<sup>®</sup>**

- ..... for anti-inflammatory, anti-rheumatic benefits at effective low dosage.
- ..... for analgesia plus additional anti-rheumatic activity.
- ..... for anti-stress support that guards against adrenal ascorbic acid depletion.  
(Ascorbic Acid present as 60 mg. Sodium Ascorbate.)
- ..... dried aluminum hydroxide gel minimizes the possibility of gastric distress.

**DOSAGE:** 1-4 TEMPOGEN Tablets t.i.d. or q.i.d. (TEMPOGEN Forte, 1 or 2 tablets t.i.d. or q.i.d.) for one or two weeks. Then lower by 1 tablet every four or five days to maintenance level.

**SUPPLIED:** TEMPOGEN and TEMPOGEN Forte—in bottles of 100 Multiple Compressed Tablets. (TEMPOGEN Forte provides 2 mg. of prednisolone.)



**MERCK SHARP & DOHME**  
DIVISION OF MERCK & CO., INC.  
PHILADELPHIA 1, PA.

spasm. **Dose:** As directed by physician. **Sup:** Bottles of 100, 500 and 1,000.

**Dayamineral Filmtabs**, Abbott Laboratories, North Chicago, Illinois. Formerly sugar-coated Maxilets. A filmtab containing 10 important vitamins and 9 minerals and trace elements for complete nutritional supplementation in prophylaxis or treatment of vitamin-mineral deficiency. **Dose:** One filmtab daily. More may be prescribed in cases of severe deficiency. **Sup:** Bottles of 100, 250 and 1,000.

**Demerol APAP**, George A. Breon & Co., New York 18, New York. A tablet containing Demerol HCl 50 mg. and acetyl-p-aminophenol 300 mg. Indicated in such conditions as arthritis, cardiovascular pain, toothache, etc. to provide analgesic action of visceral and body pain. **Dose:** As directed by physician. **Sup:** Bottles of 100.

**Enegestic Coated Flexin Tablets**, McNeil Laboratories, Inc., Philadelphia 32, Pennsylvania. A new dosage form of the drug indicated for relief of muscle spasm in musculoskeletal and neurological disorders. **Dose:** As directed by physician. **Sup:** Bottles of 36.

**Neraval Sodium Sterile Powder**, Schering Corp., Bloomfield, New Jersey. A short-acting general anesthetic for intravenous administration which can be used in a full range of operative procedures including major abdominal, plastic and resective surgery, and in minor surgery on ambulatory outpatients. Also indicated in procedures such as reduction of fractures and dental surgery. Sodium 5—[1-

methylbutyl]—5—[2-(methylthio)ethyl]—2—thiobarbiturate. A sterile powder with anhydrous sodium carbonate 50 mg. per gram added as a buffer. **Dose:** As determined by physician. **Sup:** Vials of 1 and 2 Gm., boxes of 6 and 25; Vials of 5 Gm., boxes of 1 and 25.

**Nostyn**, Ames Co., Inc., Elkhart, Indiana. A scored tablet containing 2-ethylcrotonylurea 300 mg. Indicated for patients with anxiety, apprehension and tension. **Dose:** Adults—one-half or one tablet 3 to 4 times during the day and one or two tablets at bedtime to promote natural sleep. **Sup:** Bottles of 48.

**Pabirin Buffered**, Smith-Dorsey, Division of the Wander Co., Lincoln 1, Nebraska. A sequential release tablet containing acetylsalicylic acid 300 mg., p-aminobenzoic acid 300 mg., ascorbic acid 50 mg., dried aluminum hydroxide gel 100 mg. Indicated as an antirheumatic. **Dose:** As directed by physician. **Sup:** Bottles of 100 and 500.

**Plestran**, Warner-Chilcott Laboratories, Morris Plains, New Jersey. A tablet containing methyltestosterone, ethinyl estradiol and thyroid globulin. Indicated for both men and women for improvement of muscle tone and vigor. **Dose:** As directed by physician. **Sup:** Bottles of 100 and 500.

**Rolicton**, G. D. Searle & Co., Chicago 80, Illinois. An uncoated, scored 400 mg. tablet containing 1-methyl-3-methyl-6-aminotetrahydropyrimidin-2-one, brand of aminoisometradine. A non-mercurial and non-sulfonamide diuretic primarily useful for maintaining patients in an edema-free state. It

—Continued on page 80a

for your elderly  
patients



## safe and sure laxation

**Agoral relieves constipation gently**, without strain. A dose taken at bedtime almost always produces results the next morning. A patient taking Agoral can follow his or her normal daily routine because Agoral does not provoke the sudden urge induced by strong laxatives.

**Excellent in geriatrics**, Agoral solves one of the major, recurrent problems in this field, acting gently and positively. Agoral is also well suited to all other cases of acute and chronic constipation, where straining or purges are to be avoided: Postoperatively, during and after pregnancy, and in bedridden patients.

**Agoral mixes readily and uniformly** with the intestinal contents during its passage

through the tract. It aids in the retention of fluid in the fecal column, affords lubrication and provides mild peristaltic stimulation. Agoral causes no sudden, uncomfortable griping, distention or stomach distress. Used for prompt relief, it is nonhabit-forming and may be prescribed for protracted periods.

**Dosage:** At bedtime,  $\frac{1}{2}$  to 1 tablespoonful. **Contraindications:** Symptoms of appendicitis; idiosyncrasy to phenolphthalein.

**Supplied:** Bottles of 6, 10 and 16 fluidounces; and as Agoral Plain (without phenolphthalein), bottles of 6 and 16 fluidounces.

# Agoral<sup>®</sup>

*the laxative to meet all needs*

mineral oil emulsion with phenolphthalein

**WARNER-CHILCOTT**  
100 YEARS OF SERVICE TO THE MEDICAL PROFESSION



**IN URINARY  
TRACT  
INFECTIONS**

**RELIEF**

**STARTS IN A MATTER OF MINUTES  
WITH**

**urised**

*chimedica*

**SWIFTLY** combats the two primary causes of pain, burning, urgency, dysuria, frequency in genito-urinary infections.

URISED's dual-powered formula exerts direct and steadfast control on pain-producing factors.

In a matter of minutes, through the parasympatholytic action of atropine, hyoscyamine and gelsemium, painful smooth muscle spasm is usually relieved and relaxed—directed toward a restored normal tone. In two or three days, distress may subside completely.

With equal rapidity, URISED's antibacterial agents — methenamine, salol, methylene blue and benzoic acid—traverse the entire urinary tract to hold bacterial growth at a minimum, reduce bacterial and pus-cell content, encourage healing of mucosal surfaces.

Prescribe URISED with confidence for prompt, effective pain relief, and for more dependable control of pyelitis, cystitis and urethritis. It is virtually non-toxic.

*Samples, literature, available on request.*

Supplied in bottles of 100, 1000, 2000

**CHICAGO PHARMACAL COMPANY**

5547 N. Ravenswood Ave., Chicago 40, Illinois

Pacific Coast Branch, 381 Eleventh St., San Francisco, Calif.

*Overcomes Muscle Spasm*

*Prompt Antisepsis*

The Original  
Alseroxylon

# *Rauwiloid*<sup>®</sup>

for the  
Somatic  
AND  
the Psychic Phase of

## HYPERTENSION

In addition to its gentle antihypertensive action, Rauwiloid provides psychic tranquility and overcomes tachycardia. Thus Rauwiloid participates in *both* the somatic and psychic phases of therapy for hypertension.

Treatment in *all* types of hypertension may begin with Rauwiloid. 80% of mild labile hypertensives require no additional therapy.

Dosage is definite and easy: two 2 mg. tablets at bedtime.

**Riker**

LOS ANGELES

HOW VAGISEC LIQUID

# PENETRATES

RECESSES OF VAGINA  
AND EXPLODES  
TRICHOMONADS  
OFTEN MISSED

Photomicrograph of section of epithelium of normal vaginal mucosa, enlarged 750 times, shows uneven surface where trichomonads hide. VAGISEC penetrates surface and explodes organisms in hard-to-reach areas.

**T**OO OFTEN AN ORDINARY trichomonacide fails to cure vaginal trichomoniasis because it has little or no effect on parasites that are not on the surface.<sup>1</sup> Trichomonads burrowed deeply into the roughened mucosa survive and set up new foci of infection. In fact, even a few hidden trichomonads remaining after treatment can cause acute exacerbations. With VAGISEC® liquid and jelly you can overcome this most troublesome problem.

**Penetrates thoroughly**—This new and unique trichomonacide spreads out and wets the entire vaginal surface. It rapidly dissolves mucinous materials, fats and blood clots.<sup>1</sup> It penetrates the cellular debris that lines the vaginal walls and shields the parasites, reaching trichomonads deep in their hiding places.

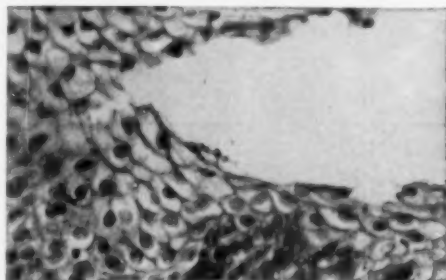
**Explodes trichomonads**—VAGISEC liquid actually explodes trichomonads within 15 seconds after douche contact.<sup>2</sup> Two surface-acting agents and one chelating agent combine to weaken the cell membrane, to remove the waxes and lipids, and to denature the protein. With its cell wall destroyed, the parasite imbibes water, swells and explodes. All this occurs within 15 seconds. Only scattered fragments remain.

**Proves highly effective**—With the Davis technique you can now rid patients of "trich," even cases that have resisted other treatment. VAGISEC liquid was developed as "Carlendacide," by Dr. Carl Henry Davis, M.D., noted gynecologist and author, and C. G. Grand, research physiologist.<sup>1</sup> Clinical trials by more than 150 physicians show better than 90 per cent success.<sup>3</sup>

**Use liquid and jelly**—In the Davis technique, VAGISEC liquid is used in office therapy. At the same time, liquid and jelly are prescribed for home use. They are well tolerated, leave no messy discharge or stain.

**Office treatment**—Expose vagina with speculum and wipe walls dry with cotton balls. Then wash thoroughly with a 1:100 dilution of VAGISEC liquid. Remove excess fluid with cotton balls. Dr. Davis recommends six treatments.

**Home treatment**—Patient douches with VAGISEC liquid every night or morning and then inserts VAGISEC jelly. Home treatment is continued through two menstrual periods, but omitted on office treatment days. Douching contraindicated in pregnancy.



One course of treatment—"If the treatment has been accomplished as directed," the patient "will have no flagellates provided the infection was limited to the vaginal canal . . . A few women have infected cervical, vestibular or urethral glands and require other types of treatment."<sup>4</sup> Continued douching with VAGISEC liquid two or three times each week for eight to twelve weeks helps prevent re-infection.

**Prevents coital re-infection**—Infected husbands are . . . a potential source of re-infection in wives successfully treated.<sup>5</sup> Prescribe for your patients the protection afforded by Schmid high quality prophylactics. Specify the superior RAMSES® rubber prophylactic, transparent, tissue-thin, yet strong. If there is anxiety that rubber might dull sensation, prescribe XXXX (FOUREX)® prophylactic skins, of natural animal membrane, pre-moistened.

**Active ingredients in VAGISEC liquid:** Polyoxyethylene nonyl phenol, Sodium ethylene diamine tetra-acetate, Sodium dioctyl sulfosuccinate. In addition, VAGISEC jelly contains Boric acid, Alcohol 5% by weight.

**References:** 1. Davis, C. H., and Grand, C. G.: *Am. J. Obst. & Gynec.* 68:539 (Aug.) 1954. 2. Davis, C. H.: *J.A.M.A.* 157:126 (Jan. 8) 1955. 3. Davis, C. H.: *West. J. Surg.* 63:53 (Feb.) 1955. 4. Davis, C. H. (Ed.): *Gynecology and Obstetrics* (revision), Hagerstown, W. F. Prior, 1955, vol. 3, chap. 7, pp. 23-33. 5. Lanceley, F., and McEntegart, M. C.: *Lancet* 1:668 (Apr. 4) 1953.

**JULIUS SCHMID, INC.**  
*gynecological division*

423 West 55th Street, New York 19, N. Y.

VAGISEC, RAMSES and XXXX (FOUREX) are registered trade-marks of Julius Schmid, Inc.

†Pat. App. for

**NEW!**

**Chloral  
Compound**

for the  
pattern of  
normal sleep

**PERICLOR<sup>®</sup>**

petrichloral (pentaerythritol chloral)

**CAPSULES**



"With pentaerythritol chloral (PERICLOR) an average of two hours more sleep was obtained with one-third to one-half the usual dose of chloral hydrate, and the disadvantages of both chloral hydrate and the barbiturates were avoided."<sup>1</sup>

PERICLOR is a new non-barbiturate hypnotic-sedative that brings on natural sleep quickly. When patients awake they feel refreshed and alert. There is no evidence of habituation—or gastric upset.

Gatski found PERICLOR 97.8% effective in 251 patients.

**DOSAGE:**

Sedative—1 capsule q. 4-6 hours

Hypnotic—2 capsules on retiring

•AVAILABLE: Bottles of 36

1. Gatski, R.L., Pentaerythritol chloral: a new agent for hypnosis and sedation: Am. Pract. & Dig. Treat. 6:1885 (Dec.) 1955.

**IVES-CAMERON COMPANY**

Philadelphia 1, Pa.






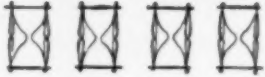
is not intended for initial diuresis in severe congestive failure. There are no known contraindications and side effects are minimal. **Dose:** One tablet, four times a day with meals on the first day and then one tablet, twice daily with meals. Rolicton may be used for initial diuresis when fastness has developed to other diuretics or when they are contraindicated; under these circumstances up to ten tablets may be given for short periods of time. **Sup:** Bottles of 100 and 500.

**Seco-Synatan Tabules**, Irwin, Neisler & Co., Decatur, Illinois. Contains d-amphetamine tannate 17.5 mg. and secobarbital 35 mg. Indicated for symptomatic control of anxiety, depression or obesity. **Dose:** One or two tabules at 10:00 a.m. for all day control. **Sup:** Bottles of 50 and 500.

**Serpasil 10-ml**, Ciba Pharmaceutical Products, Summit, New Jersey. A parenteral solution containing 2.5 mg. reserpine per ml. Indicated in acute hypertension and psychiatric conditions to quiet acutely disturbed patients. **Dose:** For hypertension—one ml. intramuscularly every 8 to 24 hours. Psychiatric conditions—two to four ml. intramuscularly. **Sup:** Multiple dose vials of 10-ml. in packages of 1, 6 and 50.

**Sigmamycin**, Pfizer Laboratories, Division of Charles Pfizer & Co., Inc., Brooklyn 6, New York. A capsule containing tetracycline 167 mg. and oleandomycin 83 mg. Indicated in the treatment of a wide range of microbial infections caused by both Gram positive and Gram negative bacteria, with added protection

—Concluded on page 82a

For the  ambulant asthmatic:  
the only tablet  that relieves  
asthma with nebulizer speed   
for 4 full hours 

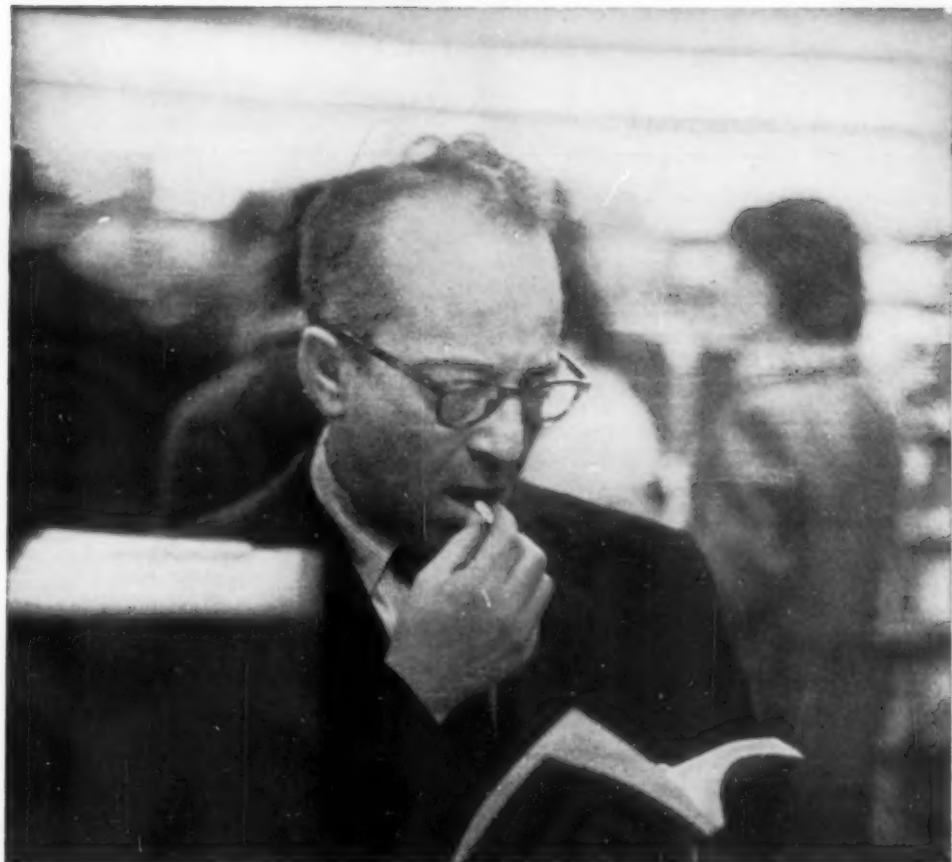
*First, hold tablet under tongue 5 minutes for quick bronchodilation from sublingual aludrine.*

*Then, swallow NEPHENALIN tablet for 4-hour asthma relief with theophylline-ephedrine-phenobarbital.*

*Dose: 1 tablet as needed (up to 5 a day). Bottles of 20 and 100. THOS. LEEMING & Co., Inc., New York 17, N. Y.*

**Nephenalin**  
(for adults)

**Nephenalin**  
PEDIATRIC



Parenteral-like androgen effect without injection

# Metandren<sup>®</sup> Linguets<sup>®</sup>

Patients with diminished androgenic activity improve satisfactorily on parenteral androgen therapy — but may feel "tied" to your hypodermic needle.

Fully as good results can be obtained with Metandren Linguets . . . for they are promptly absorbed buccally or sublingually into the systemic circulation, thus by-passing early inactivation in the liver and in the digestive tract. Twice as potent as orally ingested methyltestosterone, Metandren Linguets provide an effective, economical and convenient form of androgen therapy.

*Metandren<sup>®</sup> (methyltestosterone U.S.P. CIBA) Linguets<sup>®</sup> (tablets for mucosal absorption CIBA), 5 mg. (white, scored) and 10 mg. (yellow, scored).*

**C I B A**  
SUMMIT, N. J.

against resistant strains. **Dose:** One to two capsules 4 times daily. **Sup:** Bottles of 16 and 100.

**Tace with Androgen Capsules,** The Wm. S. Merrell Co., Cincinnati 15, Ohio. Contain chlorotrianisene 6 mg., methyltestosterone 2.5 mg. Indicated for post-menopausal and menopausal therapy and for the relief of symptoms of aging and osteoporosis. **Dose:** As directed by physician. **Sup:** Bottles of 100.

**Tempogen Forte Tablets,** Merck Sharp & Dohme, Division of Merck & Co., Inc., Philadelphia 1, Pennsylvania. A tablet containing Hydextra 2 mg.; aspirin 0.3 Gm.; sodium ascorbate 60 mg.; and dried aluminum hydroxide gel 0.2 Gm. Indicated in the treat-

ment of rheumatic conditions. **Dose:** As directed by physician. **Sup:** Bottles of 100.

**Trevidal Liquid,** Organon, Inc., Orange, New Jersey. Contains aluminum hydroxide, calcium carbonate, magnesium trisilicate, magnesium carbonate and vegetable mucin. Indicated in the treatment of hyperacidity and peptic ulcer. **Dose:** As directed by physician. **Sup:** Bottles of 12 oz.

**Troph Iron Tablets,** Smith, Kline & French Laboratories, Philadelphia 1, Pennsylvania. A new dosage form of the preparation indicated for appetite stimulation and nutritional iron deficiency. **Dose:** As directed by physician. **Sup:** Bottles of 50.

RESERVED FOR TOPICAL USE ONLY

PATIENT *Mrs. Jones*

R

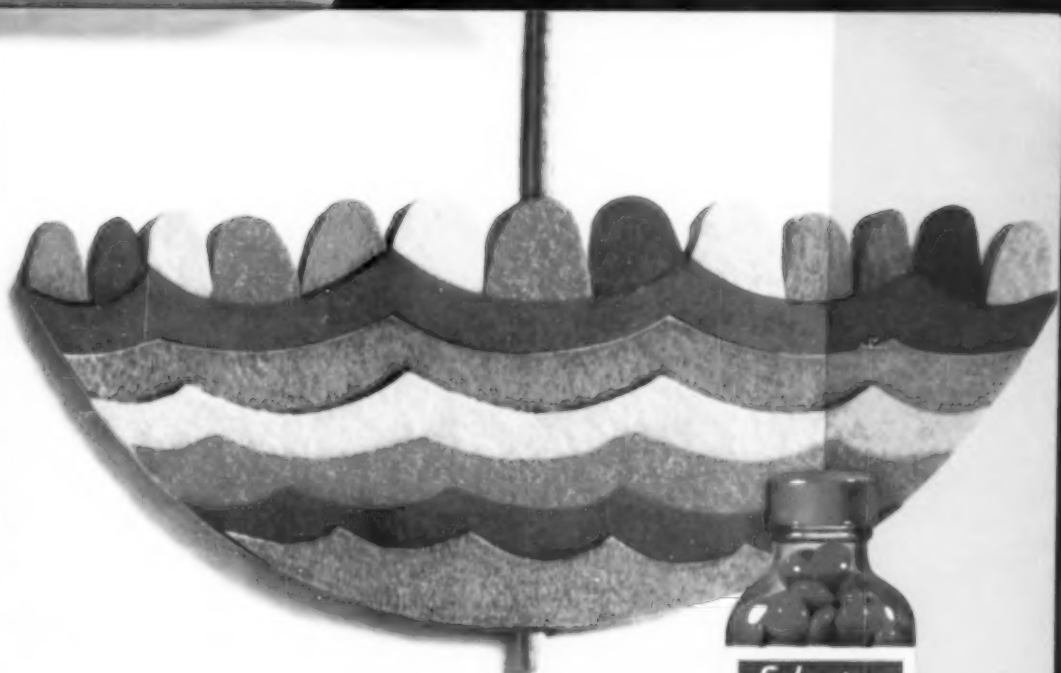
**NEO-MAGNACORT\*** *3 ss*  
neomycin and ethamincort

*Sig. apply locally b.i.d.*

AVAILABLE ON R

*Wm. H. Jones* M.D.

\*trademark



always "in season" for colds



and...better for pain anytime...

**CORICIDIN® with codeine\***  
¼ gr. or ½ gr.

CORICIDIN Tablets contain:  
chlorphenpyridamine  
maleate 2 mg., aspirin 0.23 Gm.,  
phenacetin 0.16 Gm., and  
caffeine 0.03 Gm.

\*Subject to Federal Narcotics  
Regulations. CN 7-65-106



**Schering**

**PRANTAL  
REPETABS**



eases the load  
improves the outlook  
for the peptic ulcer patient

for acute episodes...PRANTAL Injection, 25 mg. per cc.  
8 to 12 hours' relief...PRANTAL REPETABS,® 100 mg.  
for adjusting dosage...PRANTAL Tablets, 100 mg.

PRANTAL® Methylcellulose, brand of diphenamyl methylsulfate. 25-7-53-198

now you can prescribe

# 4 sulfas

in a delicious suspension...no unpleasant aftertaste

## DELTAMIDE<sup>®</sup>

THE PREFERRED QUADRI-SULFA MIXTURE

Suspension

Tablets

Finicky patients are on your side when you prescribe Deltamide Suspension. Its delightful synthetic chocolate-like flavor completely masks the taste of sulfas. Deltamide Suspension can safely be given to children and other patients sensitive to chocolate.



Try Deltamide in urinary tract infections. Action is rapid and side effects rare. Deltamide is economical for your patients.

Each 5 cc. teaspoonful of the Suspension, or each Tablet, supplies:

Sulfadiazine	0.167 Gm.
Sulfamerazine	0.167 Gm.
Sulfamethazine	0.056 Gm.
Sulfacetamide	0.111 Gm.

Tablets: Bottles of 100 and 1000.

Suspension: 4 and 16 oz. bottles.

*When the situation also calls for penicillin—*

**DELTAMIDE w/Penicillin**

Each tablet or 5 cc. of suspension contains—in addition—250,000 units of potassium penicillin G.

Tablets: Bottles of 36 and 100. Powder for suspension: 60 cc. bottles to provide 2 oz. of suspension by adding 40 cc. of water.



**THE ARMOUR LABORATORIES**

A DIVISION OF ARMOUR AND COMPANY • KANKAKEE, ILLINOIS

Abbott LABORATORIES  
North Chicago, Illinois

HYDROCHLORIDE

*Tronothane*  
(PRAMOXINE HYDROCHLORIDE, ABBOTT)  
CREAM/STERILE JELLY/COMPOUND LOTION (calamine, zinc oxide, menthol added)

Dear Doctor:

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Consider these safety values, Doctor. They can mean wider usage of surface anesthesia in your everyday practice.

Sincerely,

Abbott

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# Chronic Obstructing Ileitis Treated with A Simple Ileocolostomy

## A 26 Year Follow-up

EDWIN J. GRACE, M.D.  
Brooklyn, New York

The sundry medical comments that followed the conservative operation on President Eisenhower would suggest that certain medical authorities who were especially interested in obstructing ileitis, but not directly responsible for the President's health, failed to review some of the medical literature on ileocolostomy performed in 1930 before Doctors Burrill B. Crohn, Leon B. Ginzburg, and Gordon D. Oppenheimer definitely identified this clinical entity in 1932.<sup>1</sup>

In 1941, we reported<sup>2</sup> a ten-year follow-up on a patient with obstructing ileitis on whom an ileocolostomy, bypassing the obstruction, had been performed.

Case report: In 1928 this 35-year-old female was seen for complaints of diarrhea, nausea, vomiting, and acute pains after eating. She failed to respond to various medical therapies. Appendec-

tomy was performed in 1929 on the basis of a diagnosis of chronic appendix. There was no relief of symptoms. Weight loss was 56 pounds in 1 year. The patient reported to this clinic, weighing 59 pounds (Fig. 1 A). On the basis of x-ray studies we made a diagnosis of partial obstruction of the terminal ileum. Ileocolostomy was performed April 9, 1930, with an uneventful recovery.

This conservative surgical approach, done two years before the publication of Crohn, Ginzburg, and Oppenheimer, definitely supports the optimistic prognosis of the surgical and medical team attending the President.

Our patient has been under constant observation for 26 years (Fig. 1 B and 1 C). On June 25, 1956, after complete laboratory and x-ray studies, we found the patient in excellent condition with the one exception of her weight. Her



A. April, 1930

B. January, 1941

C. June 19, 1956

present weight is 155 pounds, about 35 pounds overweight. Patient has not had a sick day since surgery.

Gastrointestinal series revealed the following:

Fluoroscopy—Esophagus was normal; stomach and duodenum showed no evidence of intrinsic defect; peristalsis normally active; pylorus easily patent.

Film examination—Stomach and duodenal cap were not abnormal. Muco-

sal markings were intact. Duodenal loop not widened. Four-hour film revealed the head of the meal in the mid-ascending colon. Tail of the meal was in the terminal ileum and barium appeared to be emptying normally through the ileocecal region. Five-hour film after fluoroscopy with a barium meal showed the head of the meal now in the mid-transverse colon. Proximal small bowel was filled with barium given during fluoroscopy. No definite evidence

of ileitis was seen. The region of the colostomy was not visualized.

We are rightly concerned with the prognosis on our Chief Executive. There are those who question continued good health without recurrence of the ileitis. The review of our case, 26 years postileocolostomy, has been presented

to show agreement with the opinions of the conservative surgical-medical team of the President. Our patient is a living example of one who has led a normal, active, happy life, completely free from all illness. We feel that the optimistic prognosis of the President's medical advisors seems justifiable and warranted.

### Conclusion

Our conclusion, published in 1941<sup>2</sup> ten years after simple ileocolostomy for obstructing ileitis, may again be restated with more confidence, after 26 years follow-up on our patient: "In view of the excel-

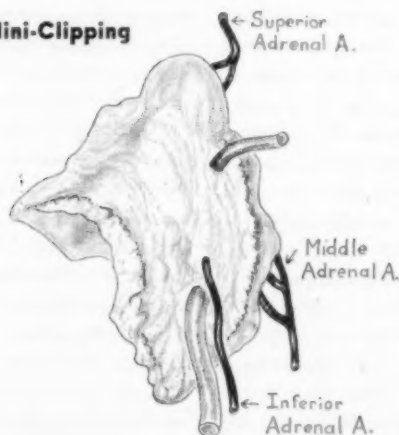
lent result ten years after conservative measure of ileocolostomy, this case should be added to the accumulating evidence warranting an open mind toward conservative therapy in this type of disease."

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121 Fort Greene Place

### Clini-Clipping



Blood supply of the adrenal gland—  
from three sources.

## Obesity

This summarization attempts to cover the essential information on the subject, including therapy, and is designed as a time-saving refresher for the busy practitioner.

About one-fifth of the population of the United States are obese. There are many social, economic and medical complications to being obese. Recent actuarial studies by life insurance companies have starkly documented the risks of being obese. One 25 year study<sup>1</sup> covering 25,000 men and 25,000 women revealed a 150% mortality rate above the expected among the obese. Conversely, substandard policy holders who decreased their weight had a significant drop in expected mortality.<sup>2</sup> Obese army officers had 1½ times the expected retirement rate.<sup>3</sup> Obesity adds to the morbidity of the degenerative diseases of middle life. Hardening of the arteries, the top cause of death in the United States, was found to account for 50% of the deaths among the obese, 149% above the expected incidence.

**Definition** The amount of avoirdupois that a person has in the ordinary sense of excess weight as determined on a scale is a poor method of determining obesity. The weight tables setting up "ideal" weights are grossly inaccurate for the clinical estimation of obesity. A better method is the determination at what point the proportion of body weight composed of fat becomes proportionally high.<sup>4</sup> The body fat in men of normal weight increases with age as the muscle and other active tissue are partially replaced by fat and the

fat depots increase. Middle age men may contain twice as much fat for the same body weight as young men. Several studies suggest that in laboratory animals and man obesity is present when the fat content reaches 30% of body weight.<sup>5</sup> Methods of determining obesity include the water-immersion method which determines the body's specific gravity based on the fact that fat has a density of 0.92 while that of the rest of the body averages 1.1.<sup>6</sup> Other methods include the determination of the lean body mass (in contradistinction to fat) which involves the estimation of body water, which is related in a rather constant fashion to lean body mass. Skin calipers can determine the fatness by measuring thickness of skin. X-ray technics, the deuterium oxide dilution method and the determination of the antipyrine space are also used.

Obesity is not the same as overweight. Overweight may be an increase in lean body mass as seen in hypertrophy of muscle induced by work, acromegaly or the adrenogenital syndrome or an increase in interstitial fluid volume such as seen in edema or myxedema.

**Classification** A descriptive classification of obesity has been used in Europe and is valuable in promoting analytical observation of the patient.<sup>7, 8</sup>

**Android Type:** The fat is chiefly on the upper parts of the body and sec-

ondarily on the abdomen and mesentery. The face is often flushed and congested, physical activity is decreased, food and beverage consumption is very high, and hypertension, liver insufficiency, high hematocrit, decreased glucose tolerance, hypercholesterolemia, hyperuricemia and a tendency to renal insufficiency are often present.

**Gynoid Type:** The fat is often at the hips and below and the face is pale. Arterial pressure is often low except in menopausal women. Other findings are edema of the extremities, varicose veins, chilblains, low hematocrit, easy fatigability, hepatic disorders are rare and intake is usually not remarkable.

**Sponge-like Obesity (Paradoxical or Gilbert-Dreyfus Obesity):** This type is often seen as a sequel to a long period of food deprivation and protein shortage in young women. Excess fat is found at the origins of the limbs, particularly the legs, avoiding the extremities and later on the chest, hips and lower dorsal regions. Water and chlorides are retained with the fat. The skin is dry and parchment-like and nervousness and insomnia are usually present. The food intake is not excessive. Thyroid function is unimpaired and emotions and overwork seem to play a role in the onset of the obesity.

**Endocrine Type:** Obesity associated with mild thyroid insufficiency is often found with digestive atonia, loss of pilosity and behavioral difficulties. Many patients have menstrual difficulties and the obesity often starts during an episode of sexual life, such as menarche, pregnancy, parturition, ovariectomy or the menopause.

A classification based on etiology in both experimental animals and man has been devised by Mayer.<sup>9</sup> In man the

obesity may be genetic as found in congenital adipose macrosomia, monstrous infantile obesity, Laurence-Moon Biedle syndrome, hyperostosis frontalis interna, von Gierke's disease and in familiar hypoglycemia. The hypothalamic origin includes dystrophic adiposogenitalis, panhypopituitarism and narcolepsy and Kleine-Leven syndrome. Other central nervous system origins include frontal lobotomy and bilateral frontal lesions. Endocrine origins include insulin-producing adenoma of the islets of Langerhans, diffuse hyperplasia of the islets, diabetes mellitus, chromophobe adenoma of the pituitary without hypothalamic injury, Cushing's syndrome, treatment with cortisone or adrenocorticotrophic hormone, Bongiovanni Eisenmenger syndrome, gynandria and gynism, aspermatogenic gynecomastia without aldigism, male hypogonadism, postpubertal castration, menopause, ovarian disorders, paradoxical Gilbert-Dreyfus disorder, pseudohypoparathyroidism and gout. Other causes include immobilization, psychic disturbances and social and cultural pressure.

**Etiology** Obesity is not simply due to an excess of caloric input to caloric intake. However, in most cases, a plethora of calories is the cause of the obesity per se. When the intake of food, whether protein, fat or carbohydrate, exceeds in caloric value the expenditure of work and heat, the excess will be stored in the body tissue as fat. There is increasing evidence that there are more basic factors which the individual cannot control, or can control only temporarily and with difficulty. It is entirely possible that excess caloric intake may only reflect underlying metabolic, neurosomatic and/or psychiatric abnormalities. Much of the lab-

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oratory information currently available is difficult to integrate. It is possible that many of the experimental animal results are only laboratory curios or that many of the data are related to an artificial isolated portion of the obesity cycle.<sup>10</sup> Human obesity probably arises from multiple etiologies, prototypes of which are only now being discovered experimentally. It is also possible that the various etiologies are significant only within certain limits, and that human obesity is due primarily to increased caloric intake over output.

*Glucostatic Theory:*<sup>11, 0</sup> Many studies have been conducted on the normal mechanisms for regulating food intake. Mayer has suggested the glucostatic theory of food regulation. Since food is taken at rather frequent intervals a regulating device acts in a relatively short period of time. Between meals the fat or protein content of the body changes very slightly, and it is unlikely that a hypothalamic center would be sensitive to such increments. Body stores of glycogen, however, are very small and postprandially there are only 75 Gm. of liver glycogen. The drop in blood glucose attendant upon depletion of liver glycogen is minimized by gluconeogenesis and by the shifting of metabolism in non-nervous tissue from glucose to fat, thus affording the nervous system a continuing energy source. Mayer used as a working hypothesis that the central nervous system, dependent upon a continuous glucose supply, should maintain "glucoreceptors" sensitive to changes in blood glucose. The underlying concept is that fluctuation in appetite must be related to fluctuating blood glucose levels. Decreased utilization of the blood glucose rather than hypoglycemia itself is postulated to be

responsible for increased appetite leading to obesity. Studies have shown that interference with phosphorylation of glucose, involving a hexokinase reaction, results in lowered utilization of glucose by the central nervous system. Hunger is induced when the delta-glucose (arterial-venous glucose difference) declines below 15%.

Brobeck<sup>12</sup> believes that the "feeding center" in the lateral hypothalamus is the sensitive area in the glucostatic theory. A possible mechanism whereby the receptors are informed has been suggested by the fact that serum phosphate and potassium fall when delta-glucose levels are high. The passage of potassium and phosphate into cells may be the mechanism whereby glucose level is translated into neural activity.

The proponents of the glucostatic theory recognize that the cerebral cortex integrates hypothalamic impulses and that other afferents, such as from the stomach, play a role in determining conscious states of hunger. Conditional reflexes are determinants of appetite, as well as other complex physiological and psychological factors which may act at any given time to temper intake. Since the physiological mechanism of food intake is extremely complex, any theory is vulnerable in man, particularly where cerebral integration is most complex, such as habit, abnormal environment, physical appearance of food and emotional associations it provokes and reactions to mental or emotional stress, all may interfere with normal regulation.

*Genetic Theory:*<sup>13</sup> An obesity in mice determined by a recessive gene termed hereditary obese-hyperglycemic syndrome has been described. This entity is characterized by extreme obesity consisting of centrally located fat, the ab-

dominal girth frequently being doubled. The islets of Langerhans are increased in number and size with more mitotic figures and less beta granules than normal. The BMR is 50% lower, the food intake is 20% higher and the activity is 5-100 times less than normal. Inactivity precedes obesity and may be etiological. The animals are hypersensitive to cold. Certain features are suggestive of hypothyroidism but thyroxine does not correct the cold sensitivity. Adrenal malfunction does not seem to be a factor. After hypophysectomy weight gain and hyperglycemia immediately stop, and the animals return to normal weight. It has been suggested that the obese animals secrete an excess of pancreatic hormone other than insulin and that growth hormone is the tropic agent.

The behavioral patterns of the obese mice is significant. It has been stated that obese people have an "oral" personality, with libido altered at the maternal breast and associated with dependence on approval and lack of aggression. The obese animals given a free choice of diet will choose a diet high in fat rather than a low fat, high carbohydrate diet selected by normal animals. The animals refuse to mate, are inactive, do not explore the environment and do not attempt to escape or bite.

Genetic obesity in humans is manifested by the various diseases associated with accumulation of lipids such as Niemann-Pick and Tay-Sachs diseases, Gaucher's disease, and Hand-Schuller-Christian disease. Studies in fraternal and identical twins have shown a high correlation between weights of identical twins, even though reared in different environments, suggesting that genetic factors in weight are important.<sup>14</sup>

*Endocrine Factors:*<sup>5</sup> The role of endocrine factors in the production of obesity is not clear. If the glucostatic mechanism is true it might be expected that hormones related to carbohydrate metabolism would affect appetite. Hyperthyroidism increases appetite and surgical or medical thyroidectomy reduces it. Insulin, adrenocortical hormones and growth hormones will affect intake. Sodium and potassium imbalance in Addison's disease may affect the glucoreceptors. Obesity in various clinical endocrine diseases has already been listed.

*Central Nervous System Factors:* Certain nuclei in the hypothalamus are known to have an effect on appetite and lesions produced in the ventro-medial nuclei in animals produce hyperphagia and hypothalamic obesity.<sup>15</sup> The hypothalamus functions as an integrating center for many visceral and somatic functions; fat and carbohydrate metabolism, sleep, temperature, water metabolism, sexual function and appetite. Although these animals show normal glucose tolerance curves, normal fasting blood sugar levels and increased sensitivity to insulin, an excellent correlation has been found between lowering non-fasting blood glucose levels and the hunger demonstrated by individual animals.

Frontal lobe lesions produce obesity. Of 74 patients with frontal lobotomy, 70 developed increased appetite, 50 permanently.

*Psychosomatic Obesity:*<sup>16</sup> There have been many papers explaining obesity on a psychosomatic basis. Overeating is said to lead to vicarious satisfaction. It may compensate for denied gratification in acceptable social endeavor. If a patient is frustrated, envious, angry or a

failure his compensation may take the form of "oral gratification." Some have stated that imprisoned in every fat man is a thin man wildly signalling to be let out and that weight reduction in middle life is impossible if substitute satisfaction to replace that provided by overeating is ignored. Some foods are related to childhood regression, as a fetish or a self-reward. One study of 500 obese patients revealed that three-fourths admitted to eating more frequently if nervous or worried. Mayer has stated that confusion regarding causation and association seems to characterize most of the studies dealing with psychosomatic obesity. He points out that the conclusions are based on poor or no controls. He inquires if the psychological effects of obesity are not sometimes difficult to distinguish from described causal factors.

**Activity:**<sup>17</sup> Clinicians have often underestimated the effects of activity on the development of obesity. It has been erroneously stated that activity is of little value in reducing, since it requires little energy expenditure. Studies in man and laboratory animals, however, have demonstrated the profound influence of exercise on the rate of fat deposit. If energy expenditure is proportional to body weight, the obese person expends more energy and hence burns more body fat, for the same amount of exercise as a normal person.

**Fat Metabolism:** It is known that fat metabolism is under neural and hormonal control and that there is an active exchange of fat into and out of the fat depots of the body. Some observers have found a retarded mobilization of fat in obese animals.<sup>18</sup> The term "lipophilia" is descriptive of the tenacity with which the obese frequently conserve their

stores of fat, despite restriction of caloric intake below output. Increased glucose tolerance in actively obese females may be due to increased lipogenesis,<sup>19</sup> indicating a continued need for dietary carbohydrate. Increased lipogenesis rather than difficulty in utilization of stored fat has been suggested as a possible source of obesity and high protein, high fat and low carbohydrate has been recommended to prevent the accumulation of pyruvic acid and thereby favoring the utilization of fat stores.<sup>20,21</sup>

Hyperinsulinism has been suggested as a cause of obesity, due to an increase in islet beta cell secretion<sup>22</sup> and a flattening of the intravenous glucose tolerance curve.<sup>23</sup>

**Complications** Obesity and mortality; Whether cause and effect or mere association there is positive correlation between obesity and decreased longevity. A 1932<sup>24</sup> study utilizing data from 32 American insurance firms showed there was a mortality well above the average in overweight men; the greater the obesity, the greater the mortality. Dublin's study in 50,000 adults confirmed these findings. He found that degenerative cardiovascular disease, hypertension, diabetes, gallbladder disease and cirrhosis of the liver were the chief causes of death among the obese.

Degenerative cardiovascular disease: Of 1,000 men having periodic health examinations, the electrocardiograms of 45% of the overweight were abnormal, contrasted with 8.5% of normal weight and 2% of underweight.<sup>25</sup> Evidence from the low countries<sup>26</sup> whose populations were underfed during the war indicated a decrease of coronary thrombosis and coronary disease with a corresponding rise when food became

plentiful. There are conflicting reports in regard to coronary disease and obesity in young men. Whereas French and Dusk state that 73 of 80 young soldiers who had fatal myocardial infarction were overweight,<sup>26</sup> Yater found no significant differences in the weights of 850 young men with coronary artery disease and those of 297 men of the same age who died accidentally.<sup>27</sup> The weights of those who survived myocardial infarction were on the average higher than those who died of coronary artery disease.

Pathological studies seeking to establish the relationship between obesity and arteriosclerosis are likewise conflicting. Wilens<sup>28</sup> found sclerosis of the aorta at autopsy to be increased in the obese and diminished in the emaciated. Faber and Dunn<sup>29</sup> could find no relationship between the cholesterol and calcium content of aortae at postmortem and lifetime body weight. It is clear that more studies are necessary to outline the relation, if any, of obesity and degenerative vascular disease.

**Diabetes:** Experimentally, animals with pancreatic reserve frequently develop diabetes when "hypothalamic obesity" is produced.<sup>31</sup> Dublin<sup>1</sup> showed that diabetes has four times the expected incidence in the obese male and three and three fourths the expected incidence in the obese female. Many patients lose their hyperglycemia when they cooperate in a good weight reduction program. There was a drop in morbidity of diabetes in the Scandinavian countries during the lean war years. The United States has probably the highest percentage of diabetes of any nation, which may be a product of being the best fed nation.<sup>32</sup> Certainly diabetes is a major cause of death in the obese,

and Joslin found that in 1,000 successive cases of diabetes, 77% were overweight.<sup>33</sup>

**Hypertension:** There is an excellent case for the association of obesity and hypertension. A weight losing regimen often succeeds in significantly lowering both systolic and diastolic pressures. In an army study sustained hypertension developed 2.5 times as frequently in the obese.<sup>3</sup> Studies in Leningrad<sup>34</sup> and Holland<sup>34</sup> showed that pressure levels in hyper- and normotensives fell during food deprivation to rise again when food was freely available. The rise was accompanied by an increase in hypertensive complications, such as retinal changes. Man subjected to drastic food reduction for six months had a mean decline of systolic pressure of 11% and diastolic of 7%, without restriction of sodium intake. On normal diets the levels returned to normal. Even though the role of obesity in the production of hypertension is not clear, it certainly is an aggravating factor.

**Gynecological and Obstetrical Complications:**<sup>35</sup> Toxemia has a markedly higher incidence among the obese, they tend to have larger babies, and hence more frequent Caesarean sections. However, there are no data to suggest that labor is more hazardous or that fetal mortality is greater. It has long been known that menstrual disorders and obesity are associated. In one study, 43% of women complaining of amenorrhea were obese.<sup>35</sup>

**Diseases of the gallbladder and biliary tract:** Dublin<sup>1</sup> found that the mortality from gallbladder and biliary tract disease in the obese female was three times the expected and in the obese male it was twice the expected. With the high incidence of gallstones and

cholesterosis one might suspect that the high serum cholesterol often found associated with obesity may be an inter-relating factor.

**Arthritis:**<sup>36</sup> Obesity is commonly associated with arthritis and may be an aggravating factor since it increases the strain on the joints. The triad of obesity, gout and diabetes mellitus has been reported.

**Cirrhosis of the Liver:** Dublin<sup>1</sup> has shown that cirrhosis will double the expected mortality in the male who is obese.<sup>37</sup>

**Cancer:** Although there is no increased mortality among obese due to cancer, the incidence of cancer of the liver and gallbladder is higher in the obese.

**Miscellaneous:** Obesity tremendously increases the technical difficulties in surgery, the commonest of which is the difficulty of obtaining adequate exposure. Other dangers are increased morbidity due to thrombosis, wound breakdown and infection.

**Treatment**<sup>38</sup> Prevention of excessive weight gain is preferable to and easier than treatment. Proper eating habits of those predisposed to obesity for any reason and of persons entering middle age should be established, and, unless contraindicated, moderate regular exercise should be encouraged.

The problem of obesity is not amenable to oversimplification or to an easy cure. In a given individual manifold factors may be at work, constitutional, humoral, social and cultural, neurological and psychological. The same treatment may have widely varying results in two individuals. Treatment must be divided into the elimination of etiologic factors and the reduction of the excess fat stores. The intelligent management

of the obese can be divided into four parts.

1. **Diagnosis:** A careful history should include data on the patient's parents and siblings. The patient's own weight history should be documented and, if possible, related to changes in the environment or changes in the patient's physiological, psychological or sexual development. Cultural patterns of food taking in childhood and adult life should be determined. A careful food intake schedule as ordinarily practiced by the patient including the time of day of maximal eating should be included. Food likes and dislikes should be determined. A knowledge of the situations which are likely to precipitate overeating in the patient can be helpful in guiding long-term therapy. A careful physical examination will document the amount and distribution of weight and a classification into one of the clinical types of Leray will promote continued analytical observation. All the rare organic obesity types, such as endocrine, lipoidoses and other genetic obesities should be ruled out.

2. **Education:** It should not be the physician's function to scare the patient in regard to the increased morbidity and mortality of obesity, which although documented, may be association rather than causation. Obesity is not a subject for moralizing, but is a medical problem of wide scope requiring a physician's continuing diagnostic and therapeutic skill. The physician should point out the healthful advantages and the esthetic rewards attendant upon lowered weight and should be careful not to shift the entire burden of reducing on the patient. Every adult patient should be made cognizant of the calorie value of foods. This will help him to

guide his own therapy and save him from dishonest claims of miracle "obesity cures" and "miracle reducing drugs" which are potentially dangerous.<sup>39</sup>

The patient should recognize the extranutritional functions of food include social eating and drinking, nervous eating for the relief of mental and physical fatigue and oral regression secondary to frustration, anxiety and other emotions. Drugs such as amphetamine may be helpful at the beginning of a diet to convince the patient that his appetite can be reduced. There are numerous other preparations available to the physician for this purpose.

3. *Diet*: Weight reduction can be accomplished by decreasing the food intake, by increasing the energy expenditure, or both. A good principle in a diet is to prescribe one on which the patient does not feel too hungry. Patients may require different diets reflecting different cultural tastes, economic ability and possible diverse etiologies. Several studies have shown that many obese patients tend to overeat in the evening. Individual diets should bear in mind the patient's rate of energy expenditure and desired rate of weight loss. The diet may have to be changed several times during the progress of the reducing period, in accordance with season and changes in level of activity.

As a general rule fad diets have little long term value, and at best may be utilized for an early brief period to convince the patient that he can lose weight. A better early regimen would be the institution of more frequent, small meals for long term reducing purposes. The rate of weight loss should be moderate. Turner recommends that

a pound a week is workable and safe.<sup>40</sup>

Long term reduction is almost impossible without deliberate pitching of caloric intake at a lower level than usual for the patient. The best diet for weight reduction is a modification of the normal diet. Reduction merely in the quantity of certain foods, rather than outright elimination is best. Most authorities do not go below 1,500 calories per day. The adult diet need not be devoid of all the essential food elements, including meat, fish, eggs, milk, dairy products, green and yellow vegetables, citrus fruits and enriched and whole grain products. The basal caloric estimate plus 10% is safe and effective intake for reducing the sedentary individual. Moderate physical activity should justify the basal caloric intake plus 25%. In children weight reduction is best accomplished by replacing the "empty" calories in candy and soft drinks with protective and nourishing foods.

Some authorities<sup>41, 42</sup> recommend 15 or 20 calories/kilogram of body weight as the best diet to allow a weight loss of 1-2 pounds a week. The protein intake should be liberal (1-1.5 Gm./kilogram) because of the high satiety value of protein, its high specific dynamic action and its importance in protecting tissues and building muscles. Carbohydrates should be taken chiefly in the low-carbohydrate bulky foods and vegetables, and should total 0.75-1.5 Gm./each gram of protein. The fat intake should be minimal such as 0.5 Gm./kilogram body weight. The diet should not be devoid of the essential vitamins. Occasionally supplementary vitamins and minerals may be given the patient. Some authorities have used a low protein diet with some success.<sup>42</sup>

Other authorities have used a moderate fat diet with some success.<sup>42</sup>

Once the desired weight has been attained, maintenance will be possible even though the diet is increased to satisfy certain desires of the patient, provided his activity requirements are not exceeded.

4. *Exercise:* Exercise, carefully

planned and regularly carried out may be very important in the weight losing regime. Calorie expenditure studies have shown that a considerable amount of calories can be expended by exercise and this should not be neglected by the physician. Exercise will not only build muscle tone and improve the patient's outlook but allow him to lose weight.

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# Speech After Laryngectomy

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In his inaugural address delivered before the annual meeting of the American Medical Association on June 12, 1956, Dr. Dwight H. Murray emphasized the teamwork and personal interest which are required in modern medical service. There are few areas in medicine where these features are as important as they are in the care of the patient who requires a laryngectomy. Wise and skillful counselling by the family physician and the laryngologist can help greatly to obtain the maximum benefit for these patients.

In cancer of the larynx, there is fortunately a high survival rate. The actual survival rate falls short of the theoretical, however, and because of this it is advisable to more fully acquaint the profession as a whole with the rehabilitation which may be achieved.

We know today that radiation therapy has its greatest application in cases where the volume of tumor is small. Surgical removal of the malignant

growth remains as the first line of defense as many cases are not seen in the early stage.

With the use of modern surgical techniques and ancillary surgical aids, such as proper anesthesia, blood replacement, and antibiotic control of infection, the mortality and morbidity rates of laryngectomy have been reduced to a very small percentage. Not only are cordal carcinomas which are too extensive to be treated by partial laryngectomy or radiation suitable for surgery, but extracordal lesions may be treated by radical wide-field laryngectomy combined with neck dissection. The low survival rate obtainable in extracordal lesions by radiation therapy may be greatly increased by wide surgical excision of the primary lesion and cervical lymphatic metastasis en-bloc.

Successful surgical treatment depends on an accurate qualitative and quantitative diagnosis, adequate surgical extirpation, and from the standpoint of both patient and doctor, *satisfactory rehabilitation*. The surgeon caring for these patients should approach the matter of their care with the emphasis placed on

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resorting them to a useful capacity in life. In this way, a situation which at first glance appears to the patient to present an overwhelming handicap can be interpreted to him realistically and optimistically.

The fact is that almost any laryngectomized patient, if he has good hearing, can learn to talk again, using esophageal speech. With training and practice, the sounds derived from the pharynx and upper esophagus can be refined into speech quite adequate for ordinary communication. The type of patient who accepts his diagnosis and treatment—knowing the adjustments which will have to be made—is a “fighter” and, if directed properly, adopts the attitude that if someone else has learned to speak again, he can also. This enthusiasm carried into the postoperative period is usually sufficient to enable him to learn the rudiments and to produce a reasonably satisfactory esophageal voice after a few lessons. After this, attention to problems such as the elimination of audible deglutition and noisy respiration helps him to refine the voice into something easily understood by anyone who can hear and who will take the trouble to listen. Children, as a rule, understand the esophageal voice most easily, probably because of acute hearing and lack of prejudice.

In teaching esophageal speech to almost two-hundred patients at the Los Angeles Eye and Ear Hospital during the past seven years, the principles established by Dr. Leroy A. Schall and Mrs. Mary A. Doehler of the Massachusetts Eye and Ear Infirmary have been followed. A laryngectomized instructor, one who speaks as his patient must learn to speak, is necessary for the proper psychological atmosphere. Patients to

undergo laryngectomy are visited by successfully rehabilitated patients before operation. As soon as the feeding tube is removed and the patient is able to swallow, usually on the 5th or 6th postoperative day, he is ready to begin his lessons. The psychological advantages of an early start are great, and before discharge from the hospital on the 10th postoperative day, he has already had several lessons.

The ability to swallow air and to belch under control is usually acquired quickly and is facilitated at first by using a carbonated beverage. Simple combinations of consonants and vowels are first learned and practiced. Counting provides a simple method of progressing to polysyllabic words. Many times the patient is too tense and tries too hard, but he must be relaxed in order to perform. Almost everyone can learn to mobilize air in the upper esophagus and to produce a sound, but it takes a little time, practice, and teaching to refine this into speech. At first, the patient has little control of his esophageal voice, and he must swallow for each syllable. He also may attempt to speak with his airway, and a common error is to attempt to speak with too much volume, expending all the air on a single word or two. A combination of individual lessons at first, followed by class instruction with other laryngectomies, is an effective method of teaching.

The value of acute hearing was demonstrated by a 56-year-old blind man who required a laryngectomy. After have been blinded early in life, he had earned his living as a musician, but had never learned to write. When his treatment was contemplated there was a question as to how he would adjust to the loss of his larynx. During his hos-

pitalization he used a typewriter as a means of communication. He learned esophageal speech after four sessions (but had 10 lessons) and 5 weeks after surgery was working at his regular employment as an organist. The total adjustment he has made has been better than that of many others and suggests that one disability may prepare a person to accept another more easily.

Women appear to excel in the art of esophageal speech; however, elderly patients often do not learn to speak, even if the hearing is acute.

Although the regaining of useful speech is the major adjustment problem in laryngectomized patients, there are other facets to a patient's total rehabilitation. Psychological adjustment to the

changed anatomical and physiological state is accomplished in a gradual way as a by-product of successful vocal rehabilitation and by contact with others with the same condition. These patients usually develop a self-assured, confident manner, and are as happy and as contented as they were prior to surgery. Most of them are able to work at their regular employment but, unfortunately, a great deal remains to be done in educating the public to accept rehabilitated persons, such as laryngectomies, back into society.

The family physician can be of great assistance in this matter and in addition, as the person who first sees the hoarse patient, can offer him invaluable guidance and encouragement.

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# Intrathecal Hydrocortisone and Multiple Sclerosis

## Isolation of Unidentified Amoeboid Cell from Spinal Fluid

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This report concerns the isolation of an unidentified multinucleated amoeboid cell from the spinal fluid of patients with various organic neurologic diseases.

During a current study on the clinical therapeutic effects of intrathecally administered hydrocortisone acetate in patients suffering with multiple sclerosis,<sup>1</sup> the twenty-four hour post-treatment spinal fluid was observed to contain numerous amoeboid cells. Most unusual was the fact that these cells showed active amoeboid movement at room temperature over a six hour observation period.

To demonstrate that this finding was not limited or confined to multiple sclerosis alone, the group of patients studied included: Multiple sclerosis, six patients; Amyotrophic Lateral Sclerosis, one; Progressive Spinal Muscular Atrophy, one; Cervical Cord Compres-

sion, secondary to cervical neck fracture, one. The cell was demonstrated in every case studied.

### Materials and Methods

**Spinal Procedure:** with 1-2 percent novocaine as local anesthesia, the lumbar subarachnoid space is entered using an 18-19 gauge spinal needle. Fluid is obtained for laboratory study. A 2.0 ml syringe containing 0.5-1.0 ml hydrocortisone acetate<sup>2</sup> is then attached to the spinal needle and fluid withdrawn to the 2 ml mark, mixed, and slowly injected. The spinal needle is withdrawn and the patient instructed to remain flat in bed without a pillow to prevent headache.

Approximately 24 hours after injection, spinal tap is repeated selecting an intervertebral space above or below the previous tap site, and spinal fluid obtained for study. Should the spinal fluid pressure be zero, a sample of fluid may be obtained by aspiration.

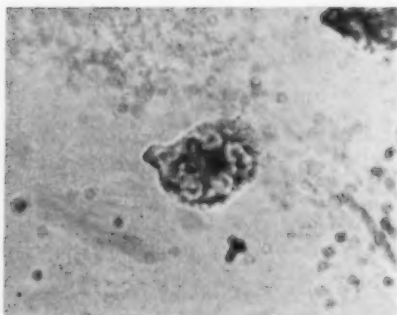


FIG. 1. Multinucleated amoeboid cell from spinal fluid.



FIG. 2. Round, non-motile form of amoeboid cell from spinal fluid.

FIGS. 1 and 2. Cells stained with iodine. Oil-immersion microphotographs.

Repeated spinal injections of hydrocortisone acetate are followed by gradual decreasing numbers of cells and loss of amoeboid motion.

**Laboratory Findings:** In every case studied the pre-treatment spinal fluid showed nothing remarkable while the post-treatment specimen contained numerous multinucleated cells. Many of the cells possessed a short blunt tail (Figure #1). Arising from this short blunt tail in some cells is a long and filamentous trailing hair-like strand. The size of the amoeboid cell is estimated at 5-8 microns in diameter. It contains 4-6 large round nuclei with no inter-

nuclear connections. Each nucleus has a large round centrally placed nucleolus. The cytoplasm is clear and relatively granule free with very little detail. Progress is slow and motility consists of extrusion and withdrawal of hyaline-like fingers of cytoplasm. Now and then the cells go into a form of a perfect sphere (Figure #2), and at times the filamentous tail is still visible and attached to the rounded cell. Within 3-4 hours over a six hour observation period, some of the cells swell tremendously and burst.

Attempted fixing and staining with the usual laboratory materials, including iron-hematoxylin, have not met with success. Concentrated iodine solution (D'Antoni's), applied to the edge of the cover slip on the slide containing the fresh specimen, was found to be the best stain for cellular detail. The iodine-stained amoeboid cells from one patient, who had a myelogram about four years previous to treatment, showed reddish-brown, irregular-sized droplets scattered here and there in the cytoplasm. This was assumed to be phagocytized oil since some oil droplets were noticed in the spinal fluid sample.

Culture has been attempted and unsuccessful with the media employed for bacteria, as well as Cleveland and Collier's medium for amoeba. Tissue culture was not done.

### Summary and Conclusions

A previously undescribed multinucleated amoeboid cell has been isolated from the subarachnoid space of patients with various organic neurologic disturbances. The cells appear without fail following a subarachnoid injection of hydrocortisone acetate. Most in-

teresting is the fact that the cells retain amoeboid activity outside the body at room temperature over a six hour observation period. In addition, staining and fixing by the usual laboratory methods have not met with success.

The living cells and motion pictures of them were demonstrated to qualified, expert cytologists and pathologists. All were of the opinion that the cells are probably "body cells," undescribed previously. That the cell is not a polymorphonuclear leukocyte is based on the fact that the cytoplasm does not contain demonstrable granules, and the nuclei are free and not con-

nected by internuclear bridges. Since the cell appears in every case studied regardless of the underlying pathology in the nervous system, the cell is assumed to be a foreign body reaction type multinucleated phagocyte.

1. The clinical results of treatment are encouraging. Two case reports with two year follow-up studies have been submitted and will be published in "Medical Times" (1957).

2. The hydrocortisone acetate used in this study can be obtained commercially in 5.0 ml bottles labeled "for Intra-articular injection." The concentration is adjusted from 25 mgm of hydrocortisone acetate per milligram to 62.5 mgm per ml by carefully aspirating 3.0 ml of the supernatant after the crystals have settled.

Scott Lane



**WANT A CHUCKLE?**

**SEE**

**"OFF THE RECORD . . ."**

**S**HARE a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice. Pages 17a and 21a.

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# A Controlled Study in Pain Relief

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The critical evaluation of the severity of pain presents numerous problems, since no objective methods are readily available for determining the degree of pain which a patient experiences, and since we do not possess the means for measuring the typical reaction of each individual patient to the impact of pain. Some persons are known to tolerate excruciating pain with great stoicism while others become upset by mild pain. It is also known that the degree of pain may vary from day to day without apparent cause or because of changes in the emotional reaction pattern of the patient.

These facts explain why the art of relieving pain has not become an exact science. When required to provide analgesia, the physician can do so only on an empiric basis, being guided by the subjective information imparted to him by his patient.

In order to reduce the possibility of inadequate relief, the simplest approach for the physician would be always to employ the most effective analgesics, such as morphine. However, these drugs carry with them a high potential for serious side effects and cannot be administered indiscriminately. Their use is restricted to those cases where the severity

of pain necessitates their administration.

For mild and moderate pain, codeine has been employed for more than a century since it was first isolated by Robiquet in 1832. Chemically, codeine is methyilmorphine. Pharmacologically and therapeutically, it provides reduced morphine effects with respect to both analgesia and untoward reactions.

Because of this weakened analgetic action, codeine does not regularly control mild and moderate pain. It is therefore often fortified with aspirin and phenacetin or other similar analgesic agents which provide increased analgetic effect by synergistic interaction of the various components. Such types of compounds frequently alleviate pain more adequately than codeine alone, but they cannot be relied upon to always provide satisfactory relief.

Some of the codeine-like synthetic analgesics appear to have a stronger action than codeine and there has been a tendency to use them instead of codeine in these combinations. Percodan, a recently introduced preparation, contains

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TABLE 1: Residual pain one hour after administration

Medication	Day Average of 42 Patients						6 Days'
	1	2	3	4	5	6	Average
Placebo .....	2.88	2.84	2.75	2.78	2.84	2.88	2.83
Codeine plus APC .....	.87	.77	.61	.74	.55	.55	.68
Double salt of Dihydrohydroxycodone plus APC ...	.64	.48	.43	.43	.26	.21	.41

one such agent. Percodan's principal analgetic constituent is a double salt of dihydrohydroxycodone, a codeine derivative with a selective and improved action on the pain awareness centers. It is said<sup>1-4</sup> to provide faster onset of pain relief, more extended duration of analgesia, and more thorough and satisfactory alleviation of pain than codeine.

This report presents the results of our clinical trial with this double salt of dihydrohydroxycodone plus APC. This combination was compared with codeine plus APC and a placebo. The two analgesic preparations had this in common: each contained the same amounts of aspirin, phenacetin and caffeine. Mixtures per se of these 3 substances possess analgetic properties and provide some degree of relief from pain. Because of this equalizing factor, however, the differences in effect between the 2 analgesic preparations in many cases is only slight. Such differences, however, become important to patients in those types of pain where the one compound provides adequate relief and the other is of insufficient potency. It was our purpose to determine these differences and to establish the relative value of each of the combinations and the placebo for relief of pain.

**Procedure** Forty-two patients, selected from those confined to a 1200-bed chronic disease hospital (Long

Island Hospital, Boston, Mass.) were studied. All patients had the symptom of pain in common.

Each of the two analgesic agents and the placebo was administered orally to all patients for individual 6-day periods. Medication was not given on the seventh day. The sequence of administration of the medications was random. Since the patients acted as their own controls, we eliminated differences in perception of pain and pain relief and excluded other complicating factors such as varying types and degrees of pain.

The three test materials were given by the ward nurse. Results were noted by a resident physician. Neither of them knew which test tablet was given, but they were informed that two analgesics and one placebo were being studied. All three trial agents were identical in size, shape and color.

We arbitrarily established a dosage schedule of three tablets daily. Patients were interrogated and clinical observations were made one hour after each administration.

We desired to express in numbers residual pain or a painfree state following each dose of the drugs. We, therefore, assigned numerical values to the severity of pain and graded this severity

Percodan, Endo Laboratories Inc., Richmond Hill, N. Y.

in ascending order from 0 to 3, zero indicating no pain, and 3, maximum severity of pain.

We wished to determine not only the difference in average analgetic potency of the two drugs but also whether one drug would provide relief from pain in cases where the other afforded only partial relief or no relief at all. In order to obtain this information, we instructed the resident to interrogate each patient carefully and thoroughly with respect to the degree of relief experienced after each administration of the test materials.

Our data were subjected to statistical analysis.

**Results** Table I presents the data of our group of 42 patients with respect to residual pain one hour after the administration of each dose.

**Double Salt of Dihydrohydroxycodone plus APC** The 6-day average of 0.41 residual pain defined according to our numerical scale reveals that only a very slight degree of pain remained after the medication. Considered by itself, the first day's average response was satisfactory. The average figure of 0.21 residual pain on the sixth day indicates that the analgesic action of this compound is very satisfactory.

**Codeine** Codeine plus APC also provided analgesia in this series of patients. The average residual pain of the 6-days' administration was 0.68. The averages of the 5th and 6th days were lower than that of the first day. The minimum residual pain on any one day when the codeine combination was given amounted to 0.55.

**Placebo** The average residual pain following 6 days' placebo administration was 2.83, indicating virtually no pain relief, this being equal to 3 in our scale.

**TABLE II: Number of doses providing complete relief from pain**

(Each drug was given 756 times)

Placebo	Codeine plus APC	Double salt of Dihydrohydroxycodone plus APC
23	353	501

Table II presents the number of individual doses of the 3 trial drugs which provided complete relief from pain. Each drug was given 756 times to our group of 42 patients.

Figure I presents percentages of the doses which provided relief (classified as complete, partial, slight and none).

**Codeine plus APC** The codeine combination provided complete relief in 353 doses, or 46.7% of the total number of doses given. Thus, less than one-half of all the doses of this combination provided complete analgesia.

**Double Salt of Dihydrohydroxycodone plus APC** Relief from the double salt of dihydrohydroxycodone plus APC was complete in 501, or 66.3% of the 756 doses given. Therefore, Percodan was capable of providing analgesia for the majority of cases of the most common types of pain.

**Placebo** In 23 instances, or 3.1% of the total doses, complete relief followed the administration of the placebo.

## Conclusions

On the basis of the results of a clinical comparative study of the analgesic effects of the double salt of dihydrohydroxycodone plus APC, codeine plus APC, and a placebo given to forty-two hospitalized patients suffering from pain, we conclude that:

1. The double salt of dihydro-

hydroxycodone with APC (Percodan) provides satisfactory analgesia for the majority of cases of the most common types of pain.

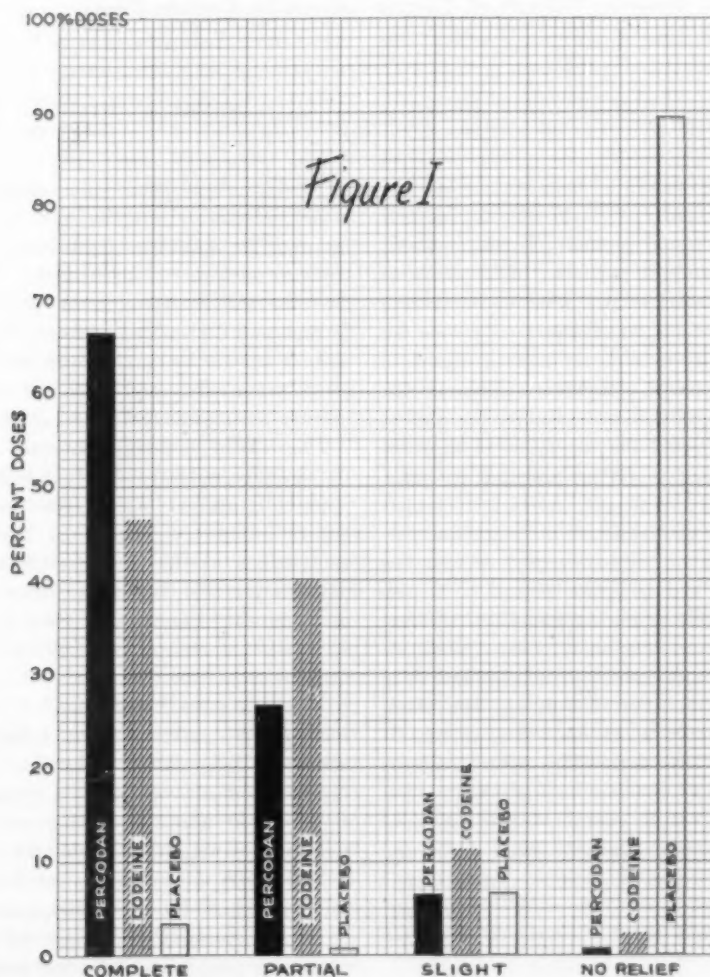
2. Percodan, the double salt of dihydrohydroxycodone plus APC, possesses significantly greater analgetic properties than codeine plus APC.

3. The placebo provided pain relief in only a few instances.

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1101 Beacon Street



# Obstetrical Emergencies

## Use of Aqueous Extract of Corpus Luteum in Certain Cases

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For some years I have become increasingly inquisitive as to why the normal uterus would prematurely empty itself, completely or partially, of its products of conception and what counteracting forces would be necessary to prevent the above disaster. I say normal uterus so that I may completely eliminate the known extra-uterine factors familiar to us all—with the exception of this one physiological factor, and that is, maintaining the proper amount of corpus luteum of pregnancy in its various concentrations chronologically during the active and complete period of its responsibilities during gestation. During this seven year study, I have used one product exclusively from the same drug house in order that dosage concentrations could be maintained on as equally a level base as possible. As a result, for simplicity, the dose has consistently been determined by volume. At no time have I had experience with either oil or oral preparations, extra-uterine factors, such

as pelvic malformations, tumors, severe acute infections, syphilis not to be ignored, the anemias, blood dyscrasias, trauma, unsuspected self-induced abortion, thyroid discrepancies, psychogenic factors, and the various other etiological factors are not to be discussed, as they have repeatedly, and with excellent clarity, been presented at great length.

I have been genuinely concerned with the so-called normal individual, with an apparently normal implant, who falls in the following categories: (1) bleeder, intra-uterine (with the exception of placenta-previa), (2) the spontaneous aborter, (3) spontaneous amniotomy, (4) habitual aborter, and (5) premature labor.

I was greatly handicapped in that during my obstetrical years I had no source of information other than that derived from my own practice, consultations on the above problems, rare articles concerning these problems, discussions with my fellow physicians, and an occasional bit of correspondence from the research department of this particular drug house. During most of

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the early work, it was imperative that the company, producing this material, was required to admit that this product had no known therapeutic values. This as you know, usually means therapeutic values were obtained without the functional physiology being understood. I had always been in disagreement and was certain that the time would arrive when therapeutic proof could be elicited.

The many experiments performed on the excised section of uterine musculature led to utter confusion, even to the point that unmistakably the preservative, chlorobutenol, was said to have a uterine relaxing factor. The work of Krant, Bryant, and Carr, all PhD's, proved without a doubt by their experiments on the intact uterus that aqueous corpus luteum extract has within itself a very active principle which, when delivered to the uterus, by way of the circulatory system, causes a diminution in uterine tone, contractility, and irritability. Further experimental and clinical work by Doctors Falls, Rezek, and Benensohn was presented in a wonderful article published in the *Journal of Surgery, Gynecology, and Obstetrics* a few years ago. This paper included obstetrical emergencies other than those that I am to discuss, and their case studies were much more numerous than mine. It is interesting to note that my results in treatment have paralleled theirs, but are even better by five to six per cent. It is my firm conviction that the differences in our results are due solely to the fact that my volume of dosage far exceeds theirs, as do my more frequent administrations and longer periods of dose schedules. Their results were obtained through studies in their own practice and the clinical facilities of both the Research and Educational Hospital and the

Cook County Hospital in Chicago. I would like to repeat the five to six per cent better results that I obtained, were strictly on spontaneous abortions, habitual aborters, spontaneous rupture of the membranes, and premature labor.

The physiology of pregnancy is not to be discussed as this report will try to adhere strictly to a clinical discussion and evaluation which, after all, is the most practical attitude. Since the above mentioned men have published the type of paper I had in mind, I would like to limit myself to the clinical use of the product, some observations resulting from its use, and the presentation of several cases.

First the product\* itself—with caution I increased the recommended doses dramatically until the relative amounts used proved to me that it reached its maximum effectiveness only when used in tremendous quantities. There was not a single instance in either small or massive dosages in which I encountered any side effects, toxic or adverse, in any sense of the word. I will unhesitatingly say that it is completely safe to use in any amount and by any route chosen. I personally prefer the intravenous or the intramuscular method and especially am partial to the combination. The volume administered depended upon the type of obstetrical emergency encountered. Oral preparations I cannot vouch for, as I have had no experience with their use; however, there is evidence available today that proves that significant blood concentration levels may be obtained within thirty minutes after oral administration. Here, again, is a new field to be explored. I considered each case equally important and due to the excellent results being obtained, I felt that I

\* Hynson, Westcott and Dunning.

was morally bound to continue the intravenous and intra-muscular treatment, eliminating the risk of a failure by my lack of knowledge of the oral preparation.

This routine is certainly an ordeal for the patient and usually works a tremendous hardship on the husband; consequently, each case was discussed with the patient and husband as to prognosis and treatment in order to assure the most complete co-operation possible. Many husbands, neighbors, (including nurses), and friends were taught the sterile technique of injection, and the schedule doses were given in the home in many instances for as much as a week at a time.

Imminent and inevitable abortions were treated in practically an identical manner. Imminent abortion was classified as such, either when the cervix began to obliterate, even to the point of dilation of the cervix or was actually dilated. Inevitable abortion was classified as that case in which the membranes were ruptured, with or without bleeding, with or without cramping, and no conception products protruding. Certainly no case of inevitable abortion was treated when the ovum protruded through the dilated cervix.

As soon as the diagnosis of imminent abortion was established, thirty to forty-five cc's of aqueous extract of corpus luteum was given intravenously. This was followed in three hours by nine cc's, deep into the buttocks, four and one-half in each gluteal region. Three hours following the intramuscular injection, nine cc's were again given by the intravenous route. Three hours later nine cc's were given into the buttocks again so that every three hours the patient received treatment, resulting in the intravenous

route every six hours and the intramuscular route every six hours. Any period of gestation was treated, regardless of the state of pregnancy. Usually in six to thirty-six hours all cramping and bleeding had ceased, yet the routine was followed for at least forty-eight hours. It was only then that the intramuscular schedule was discontinued and the intravenous schedule continued. This schedule was gradually decreased, after the pregnancy was controlled, to nine cc's intravenously every twelve hours for four days, then nine cc's every twenty-four hours for ten days, then twice a week until about the beginning of the sixth month.

The treatment of inevitable abortion, with membranes ruptured, was accomplished in about the same manner with the following exceptions; these patients I kept in bed for two weeks, regardless of cessation of cramping, bleeding, and the leakage of amniotic fluids. The initial intravenous dose was fifty to sixty cc's, and the intramuscular dose remained the same, due to the large volume injected every six hours. The same treatment schedule was followed as in imminent abortion except that the intravenous dose was increased to twenty-four cc's. This was continued carefully until the patient became asymptomatic which usually was within seventy-two hours. The intramuscular dose was then discontinued and the intravenous dose of twenty-four cc's was reduced to every twelve hours for a period of not less than seven days after all salient features of the inevitable abortion had ceased. The patient was then given twenty-four cc's intravenously every twenty-four hours for approximately fourteen additional days, then twelve cc's daily for seven days, then twelve

cc's intravenously every four to five days for several weeks, then weekly until about the beginning of the sixth month. Terminology is often confusion, and my above classification of inevitable abortion may not be in agreement with others. I might add that, in no instance, under conditions classified as inevitable abortion, were quinine and pituitrin used in an attempt to hasten delivery. All cases were treated.

In all cases in which the membranes had ruptured, great caution was taken not to contaminate the amniotic liquor. In most instances only one pelvic examination was done under sterile technique. Each woman was taught the care of her perineum and to care for herself under conditions which were least likely to contaminate her. At all times we were alert for the possibility of an infection spreading from the vagina to the placenta and foetus. In some instances penicillin was given prophylactically for approximately three days, at which time, it appeared, usually, that in some manner, the membranes had sealed themselves.

I classified premature labor as any labor beginning after the stage of viability had been reached. Here again the dose schedule depended on the triad of severity of contractions, presence or absence of bleeding and the leakage or not of amniotic fluid. I wish to state here that false labor, as you well know, was not considered, as its occurrence causes us no alarm due to the fact that it occurs so late in pregnancy that a safe stage of viability has been reached, and the completion of gestation, if the uterus has been so sensitized by the false labor, is usually a great relief to both parents and physician. A six weeks abortion is certainly not the tragedy to the parents as

the loss of any baby after the stage of viability. Premature labor, without rupture of the membranes, and without bleeding, was treated in much the same manner as above complications, in fact, the treatment of premature labor under the above conditions was exactly that procedure followed in inevitable abortion. Contractions usually ceased in eight to twelve hours. If this condition was not controlled, the dose schedule was doubled.

Premature labor with bleeding and loss of amniotic fluid was treated as follows—sixty cc's were injected rather rapidly and with the same needle in place (the adapter of an infusion bottle previously prepared), containing one hundred cc's of aqueous extract of corpus luteum in approximately three hundred cc's of physiological saline was attached. The rate of drip was thirty to forty-five drops per minute. Nine cc's were injected into the buttocks in the manner previously described, and the same alternate six hour schedule was followed as described above with the exception that each intravenous dose consisted of at least fifty cc's. When successful, the pregnancy was usually controlled within twenty-four hours. An interesting observation is that bleeding usually ceased first, amniotic loss second, uterine contractions third. Often uterine contractions did not completely cease, but were reduced considerably in frequency, duration, and severity, continuing until the termination of the pregnancy at full term.

This last mentioned condition with persisting, mild, irregular contractions was treated until approximately two and one-half weeks of the expected date of confinement.

One word about habitual abortion,

begin R even before diagnosis of pregnancy is definitely established.

I present the following unexplained, isolated facts for your consideration. I cannot personally explain the results. It has been amazingly consistent that any baby born of a mother who has undergone this treatment successfully has been unusually vigorous at birth, no atelectasis, a spontaneous, husky cry, usually pink, and very frequently urinates before the cord is tied. Naturally, this excludes physical embarrassment through the birth canal.

In some cases that have terminated unsuccessfully, there appears to be enough evidence to substantiate the fact that this was a defective ovum from its instigation. Without bleeding, cramping, or loss of amniotic fluid after seven to twelve days of treatment, the entire products of conception were lost passively, and without pain. Knowledge was obtained by careful interrogation concerning the hereditary background, both maternal and paternal, of these particular families. Usually, congenital defects were uncovered as far back as three generations. In several instances, there was an abnormal child in the family at the time of this pregnancy. The subsequent delivery of an abnormal child by persons other than myself helps substantiate the above. I have had four of the above cases. In each instance these families have also had normal children with normal pregnancies. This leads one to suspect that this treatment is ineffective in the presence of a defective ovum implant or a defective ovum.

I believe that the routine D. and C. after abortion is to be condemned. It is true that after abortion, spontaneously, there is bleeding for several

days until the entire products of conception are passed. Too quickly are D and C's accomplished without utilizing the benefit of nature. Under the Lutein treatment I have found that when the treatment is unsuccessful, the patient aborts completely and that the lochia is minimal and the patient requires little care. In the spontaneous abortions, without Lutein treatment experienced by me, there is rare necessity for immediate D. and C. as a routine measure. I believe the D. and C. in this manner is too hastily performed and often abused. I appreciate the fact that this cannot be an ironclad rule, but the fact remains, that in twelve years experience, I have yet to curette a single individual after a spontaneous abortion, having had Lutein treatment or otherwise.

Lastly, it seems that a uterus previously sensitized by Aqueous Extract of Corpus Luteum, especially in the last trimester, appears reluctant to go into labor at term. I speak of such a case as premature labor at about seven months that has been well controlled under this treatment. Even deliberate rupture of the membranes with drainage of adequate amounts of amniotic fluid, in conjunction with an oxytocic, often is unsuccessful at first, and it may be 48 hours before true labor is established.

It is not unusual to delay labor for weeks and even months after spontaneous rupture of the membranes; for the sake of brevity, I will list only a few unusual cases under this treatment.

(1) A nineteen-year-old primipara returned to my office seven days prior to her next scheduled visit merely to ask if it were unusual or customary to be wet with clear sticky water throughout the pregnancy. Immediate examina-

tion revealed the cervix closed, but there was definite gross evidence of loss of amniotic fluid with slight bleeding from the external os. There was no cramping. She was approximately 10 to 12 weeks pregnant. As she was very desirous of this baby and her husband was a medical student, the co-operation necessary was easily accomplished. At about the sixth month, two weeks after treatment was discontinued, she began a rather violent, sudden premature labor that again was easily controlled by this treatment. The husband is now practicing in the State of Texas and this six year old corpus luteum son now has ambitions either to be a doctor or a rodeo performer. One is about as rough as the other in the long run, considering the mortality tables of both professions.

(2) Twenty-four year old primipara separated from her husband permanently after two years of marriage. At the time of separation she was three months pregnant, and was most desirous of maintaining the pregnancy. She was an R.N. and at that time lived with her sister and another young lady, both of whom were R.N.'s. This was the ideal condition for perfect co-operation and fulfillment of treatment. She was under the care of another physician, when at about five and one-half months she began cramping, bleeding, and losing amniotic fluid. He suggested hastening the delivery as the pregnancy to him was hopeless. When I saw her first, she was fifty per cent effaced, three to four centimeters dilated, vertex position, station minus one, bleeding, membranes ruptured, and in an indifferent active labor. Immediate therapy was begun in large doses. In twenty-four hours bleeding, cramping, and loss of amniotic fluid was

practically controlled—forty-eight hours was controlled. This condition became static with the exception of gradual effacement week by week until delivery. Lutein was discontinued at about eight and one-half months, and upon delivery this baby, having been carried so low, was born with the soft tissue of its nose pushed laterally to the right and a tremendous amount of edema of the left cheek, such as is found on the scalp in normal molding. This, no doubt, was due to the months it had pressed against the partially dilated cervix. In four to six weeks, with a little help, the edema of the cheek cleared and with some mechanical pressure the nose straightened beautifully. She had her own dance recital at the age of seven years.

(3) Twenty-four year old primipara with all the symptoms of an early pregnancy and a small mass in the right adnexa. I could not determine the presence of pregnancy within the uterus, but the mass in the right adnexa gradually increased in size. I naturally suspected ectopic pregnancy in the right tube in spite of the fact, as you well know, diagnosis is usually accomplished after rupture. At about seven weeks gestation the suspected surgical abdomen appeared. At surgery I did not find the ectopic pregnancy, but I found, as perhaps you have already concluded, a normal pregnant uterus with a rather large beginning gangrenous, twisted, right ovarian cyst. The ovary was beyond salvage, so I removed it in its entirety. You might wonder why I present this as something unusual. This was the ovary that contained the corpus luteum. I immediately asked for 100 cc's of Aqueous Extract of Corpus Luteum to be given intravenously. This was accomplished for me by the anesthetist

even before I finished closing the abdomen. Needless to say, intensive therapy was continued until about the beginning of the sixth month, then

gradually tapered off and discontinued two weeks prior to the expected date of confinement. Result—a normal male child in every respect.

### Conclusion

In case studies such as these, consistent results cannot be obtained by treating an entire cross section of humanity. This procedure becomes a very discouraging project when one deals with the indifferent, the ignorant, and the irresponsible. There is not the co-operation from the above types that is so exquisitely necessary to carry the case to a successful conclusion. On the whole, these results were all obtained on the upper intellectual and economic stratas of society where there was excellent teamwork. Actual dose schedules were evaluated clinically, as who knows what hormone output a particular pregnant woman maintains from an ovarian or placental standpoint and just what its fluctuations might be. There is no sliderule for variations of the above schedule. This must be considered by the physician's clinical judgment. I sincerely believe that we have only begun to

attach the importance so necessary to this idea in the attempt to reduce the high foetal death rate. The experimental possibilities neglected as yet today remain extremely high. When completely understood, it may lend to even greater results and the subsequent salvaging of innumerable infants. Whether it acts directly as a uterine relaxing factor by direct action or by blocking pitressin stimulation with subsequent inhibition of uterine contractions, is not exactly known. Could it not be the simple deficiency of corpus luteum production itself with the pregnant woman? I might say all evidence is excellent for the assumption of all three factors, but even with the assumptions, Aqueous Extract of Corpus Luteum has a product within itself that is most beneficial when used properly in certain types of obstetrical emergencies.

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# The Status of Iron Therapy

## Chelates Write a New Chapter

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The therapeutic use of iron is about as old as medicine itself. Apparently when early man first began to use metal weapons he conceived the idea of attempting to imbue himself with their strength. He drank water in which swords had been allowed to rust, and sought in other fantastic ways to utilize the properties of iron physiologically.

Early in the 18th century, when Menghini first described the presence of iron in the blood, even greater impetus was given to efforts to find a means of increasing the body's stores of this metal.

A review of the literature is revealing. It would seem that through the years there have been almost as many theories and controversies concerning the effectiveness of iron therapy as there have been forms of iron products themselves.

Only within the past few years has there been any really substantial proof of the dynamics of iron absorption, its role in metabolism, and its fate through excretion. Evidence has come largely through the use of radioactive isotopes as trace metals in biochemical investiga-

tions. Many of the older concepts have been either radically revised and applied in modern therapy or rejected and discarded altogether.

The adult body contains from 3 to 5 Gm. of Iron, distributed as follows: Hemoglobin, 60-70%; storage, 15-20%; muscle, 3-5%; parenchymal iron, 0.1%; and plasma iron, 0.1%. The daily iron requirement to replace normal losses, due chiefly to exfoliation of body cells, is 0.5-1.5mg.<sup>2</sup> This shedding of iron containing cells may vary considerably among patients of all ages as well as individually at various times during the life span depending upon disease state. For example, diarrhea and gastric upset with hypermotility may result in marked increases in exfoliation of superficial cells of gastrointestinal tract, thus increasing iron losses appreciably.

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If the body demand for iron is not satisfied by intake absorption, the blood-forming tissues draw upon iron storage depots of the body . . . the liver, spleen, and bone marrow . . . for their supplies. Upon depletion of these storage depots, the body continues to form erythrocytes, but the normal hemoglobin content of the new red blood cells is abnormally low. At that stage, an iron deficiency anemia is apparent to the microscopist.

Undoubtedly many latent, sub-clinical iron deficiency anemias which have not developed to the point of iron storage exhaustion are commonplace. Symptoms of such latent iron deficiency anemias include irritability, loss of normal activity and sleeplessness, as well as pallor.<sup>3</sup> Thus it has been suggested that more metabolic functions than merely the synthesis of hemoglobin are involved when conditions of severe degrees of iron depletion develop.

The three principal causes of iron deficiency anemia are: bleeding, whatever the source, either acute hemorrhage, including blood donation, or chronic vascular leakage; poor iron absorption; and inadequate iron intake, particularly during periods such as the accelerated growth of babyhood and adolescence.

The key to the persistence of most cases of iron deficiency anemia is poor absorption. Certain facts are worth mentioning. Only iron in the bivalent ferrous state is considered to be absorbed by man to any extent. The average diet is frequently deficient in utilizable iron to begin with, and only about 10 percent<sup>4</sup> of the amount taken as food remains in the ferrous state to the point where absorption may actually occur. Unfortunately, the oral intake of ferrous salts does not answer the problem

because it must allow for rapid oxidation of these salts in the gastrointestinal tract, and in consequence the formation of ferric compounds which, according to most authorities, are not absorbed as such. Actually even under optimal conditions of digestion only a fraction (about 20 percent) of a given dose of ferrous sulfate is utilized. Furthermore, the ferric compounds so formed by the oxidation processes act as irritants on the gastrointestinal mucosa and cause discomforts such as cramps, stomach upset, constipation and diarrhea in  $\frac{1}{3}$  to  $\frac{1}{2}$  of patients. In many cases, iron therapy has been abandoned because of one or more of these intolerance factors.

Various methods have been tried to overcome the twin problems, lack of absorption and gastrointestinal distress. Ferrous sulfate, combined with reducing agents such as ascorbic acid, has been used in an effort to reduce the extent of oxidation, and special tablet coatings have been employed in an attempt to protect the ferrous salts until their absorption would be expected to take place, but none has been entirely successful.

Other tests have been designed to build up tolerance against gastrointestinal disturbances by starting iron therapy with small doses and gradually increasing the amount to therapeutic levels. However, this approach is apt to delay adequate hemoglobin response, and in most cases no tolerance develops.

Other physicians have given heroic doses of iron to make up for the poor absorbability, but have found that their methods commonly result in the formation of an equally large volume of irritating ferric compounds and greater distress for the patient.

Because the gastrointestinal side-effects are somewhat diminished if the ferrous salt is taken with, or immediately following meals, physicians generally so prescribe it. But again frustration occurs because the food itself further interferes with iron absorption. Many foods hasten oxidation of the ferrous ion; others, particularly phosphorus in bread, cereals, and milk, form insoluble phosphates which are non-absorbable. When iron-enriched bread, made with radioactive iron, is ingested, less than 10 percent of the iron is absorbed. Iron not incorporated in bread is better absorbed, but iron and simultaneous ingestion of four slices of bread lowers absorption to approximately that of the "tagged" bread.<sup>5</sup>

Indeed, the situation has been disappointing but never hopeless since, as all of us know, in a small percentage of cases, the tolerance and response to iron therapy is excellent. It has been suggested that the natural amino acids may serve to create better tolerance and greater absorption of iron salts in these cases. One of us (W.R.) began an investigation several years ago to determine the effects of the chelating agents on iron metabolism.

**Chelate Concept** J. Bjerrum in his treatise on "Metal Amine Formation in Aqueous Solution"<sup>6</sup> has opened a new chapter in medicinal chemistry. The real significance of the principles which he proposed are quite applicable to the therapy of iron deficiency anemia. His work stimulated an intensified study of metal complexes, or chelates . . . products formed by the interactions of certain substances, particularly proteins, in binding metals and resulting in new chemical entities. The chemical and physical properties of metal chelates are

known to vary considerably from those of their individual components and many of these newly discovered compounds are proving themselves useful as therapeutic agents.

Chelation may make a metal more soluble, or less soluble; in certain instances they become more readily diffusible through membranes. It can either inhibit or activate physiological activities in which the metal participates catalytically. Acceptance of the principles of chelation helps to explain the actions and side-effects of many drugs and demonstrates how the intensity and duration of action of others may be influenced by metals.

The study of chelates is especially informative in relation to the therapy of iron deficiency anemia. Such investigation has, led to the recent development of alpha - aminoacetic - ferrous sulfate complex, exsiccated.\* This complex is described as one which provides iron that is more rapidly and readily absorbed than other forms of iron, and produces the desirable therapeutic effects with virtually no gastrointestinal side-effects.

The advantages of this new form of iron are two-fold. First, the ferrous sulfate-amino acid complex disassociates to make the ferrous ions available, yet less vulnerable than the ions from other iron salts to oxidation in the gastrointestinal tract, and secondly, the new chelate hematinic aids in the transport of the iron through cellular membranes of the intestinal mucosa, similar to that known to occur in the transfer of iron blood serum, also by preventing the

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\* Ferronord, brand of ferroglycine sulfate complex, Nordmark Pharmaceutical Laboratories, Inc., Irvington, New Jersey.

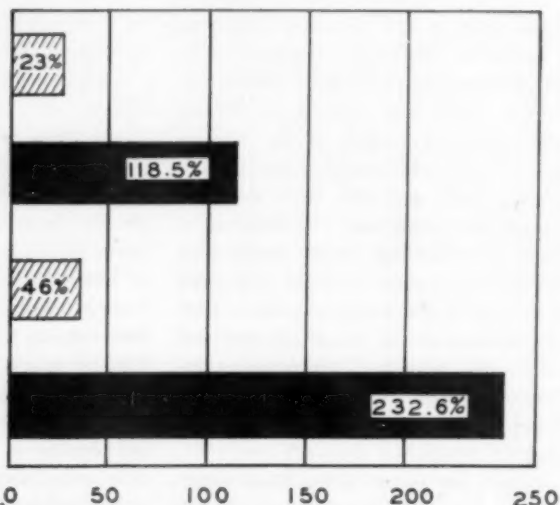
# Comparison of Serum Iron Levels\* After Equivalent Doses of Ferrous Sulfate and Ferronord

Average increase in serum iron in 3 patients after dose of 120 mg. of iron as ferrous sulfate.

Average increase in serum iron in 3 patients after dose of 120 mg. of iron as Ferronord.

Average increase in serum iron in 4 patients after dose of 240 mg. of iron as ferrous sulfate.

Average increase in serum iron in 4 patients after dose of 240 mg. of iron as Ferronord.



\*mcg. per cent

formation of nonabsorbable ferric compounds, thus keeping the usual distressing side-reactions of iron therapy at a minimum while the normal absorptive functions of the intestine are maintained.

We have studied the absorption of various combinations of ferrous sulfate and amino acids and have found that absorption of the new complex ferroglycine sulfate complex is 5 times greater than that of ferrous sulfate alone. (See Chart).

Wagner<sup>7</sup> has substantiated these findings in a clinical series. He reported a peak in reticulocyte response on the fifth day of therapy, whereas the usual response to nearly all iron salts rarely approaches such levels until the tenth to fifteenth day after therapy has begun.<sup>7</sup>

Jorgensen<sup>8</sup> used an interesting "iron

loading test", first suggested by Jasinski<sup>9</sup> in 1950, to get proof of the rapid uptake of the ferrous sulfate-amino acid complex. This test is based on the principle that the patient in need of iron and capable of absorbing available iron, experiences a change in serum iron levels following a dose of iron taken on an empty stomach. This change in serum levels is detectable due to the salmon pink coloration of the iron-protein in the serum.

In the test, a sample of blood of the patient is taken, the blood serum separated, and its color noted. A large dose of an iron product is then administered and a second blood sample is taken at the end of three hours. The serum having taken up the iron assumes a salmon-pink color. The extent of uptake can be ascertained by the depth of color since the iron-protein pigment content

of the serum is responsible for the pink color. Originally this test was developed to determine the need for iron, but it can be used equally well to determine the ability of a patient to absorb an iron medication. Consequently, the method provides a quick diagnostic aid which may eliminate the waste and inconvenience of prolonged therapy in those cases in which no iron is absorbed.

As measured by this visual "iron serum level test", the absorption of the new complex was found to be exceedingly rapid and appreciably quantitative in the majority of cases treated.

Wagner<sup>7</sup> has reported the daily hemoglobin response of 120 patients having iron deficiency anemia, treated with this new complex, as 0.96 percent in pregnant patients, 1.25 percent in postpartum cases, and 1.4 percent in gynecologic patients.

These clinical findings are corroborated by the studies of Goldberg<sup>10</sup> who measured the rate of hemesynthesis in a hemolysate system of chicken blood using Fe 59 citrate as the tracer. He found that the uptake of iron was 0.7 percent, but upon the addition of glycine in optimal molarity, the uptake of iron was increased to 22.5 percent.

Further clinical proof of the validity of the chelation concept was presented in an exhibit at the Sixth Congress of the international Society of Hematologists.<sup>11</sup> Among other data presented by the investigators were these unusual tolerance figures:

555 cases (98.5%)—excellent tolerance

8 cases—mild intolerance

The remarkably low incidence of side-effects following the administration of the new ferrous sulfate  $\alpha$ -aminoacetic acid complex is significant, and has

many implications insofar as iron therapy is concerned. It means that the complex can be freely prescribed in cases previously known to be intolerant to other forms of iron. Also, that iron therapy can be continued over a sufficiently long period of time to replace storage iron in the tissues without the risk of establishing chronic constipation or even lack of patient cooperation.

From the foregoing, we have concluded that chelation may well be the answer to many unsolved questions concerning iron absorption and its transport within the human body. Pirzio-Biroli<sup>12</sup> has observed that the extremely low dissociation constant of iron salts at the pH of the gastrointestinal tract makes it quite unlikely that the absorption of iron is a simple diffusion of ionic iron. He suggests that a chelating agent may be present which forms an easily diffusible complex with iron in fairly high concentration, and enables it to pass through the mucosal cells. This would explain individual differences in response to iron therapy as well as answering the question of why certain patients absorb relatively large amounts of iron in deficiency states, while others, lacking suitable dietary amino acids, reject the iron completely. Furthermore, it is known that increased diffusability of metals can be achieved by chelation thus permitting the transfer of a metal from one molecular arrangement into a chelate grouping and then by diffusion through membranes formerly impermeable to the parent molecule.

The transfer of iron by the blood serum from the point of absorption to the site of hemoglobin formation is probably due to a series of chelating

agents of various affinities toward metals. These agents, in delicate balance with the iron, may well be responsible for picking up or relinquishing the metal ions at the slightest change in pH.

The fact that iron in hemoglobin itself is in chelated form is believed responsible for three conditions.

(1) More iron is able to remain in

solution at the pH of the blood than if it were in ionic form.

- (2) At this high concentration the iron has none of the cytotoxic effects that are seen when ionic iron is injected intravenously.
- (3) The whole molecule has the property of exchanging oxygen and carbon dioxide.

### Summary

The most advanced research in the field of chelation leads us to accept the principles that (1) iron is absorbed as a complex, (2) transported in the blood serum by chelating agents, and (3) exists in the hemoglobin itself as a protein-chelate. The advantages to be derived from the use of ferrous

sulfate combined with aminoacetic acid in optimal molarity are obvious. For the first time since early man drank his rusty water, it is now possible to give an iron preparation therapeutically with confidence that the patient will not experience the usual undesirable effects.

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# Concerning Birth Injuries

## Some New Perspicacious Concepts

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### Multiparity Unbounded

"Ridi, Pagliaccio,  
Sul to amore in franto—"\*

How many of you readers have experienced the unforgettable thrill of hearing the spine-tingling lamentation of Canio as inimitably rendered by the greatest tenor of all the ages, Enrico Caruso? Some of those who had this privilege aver that this passage of music can never again be sung with the electrifying finesse with which Caruso rendered this lugubrious soliloquy. Since this great singer's death, the Metropolitan Opera Company has as yet failed to find an adequate replacement for the golden tones that only Caruso could produce. It is generally agreed that Caruso's death 35 years ago was an irreparable loss to the entire world; but a fact little known is that it took at least half that long for his mother to give birth to a child who was destined to live long enough for the world to hear his celestial voice—even though for only a brief span of time.

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\* Leoncavallo, *Ruggiero*: From the Opera "Pagliacci", Act I.

Enrico Caruso was the eighteenth child of his parents. Seventeen brothers and sisters in sequence had filled children's caskets before the birth of this musical comet. Of the total of 21 children born to the parents of this immortal singer, only three survived to adulthood. What a contrast to the world of today in which a single infant's death is regarded askance!

The post-World War II American mother has quite a different attitude towards parenthood to that of the mothers of the penultimate generation. Before the present generation attained the child-bearing age, there were no antibiotics; and the methods for coping with infections which too frequently supervened as sequels to childbirth were rather crude and quite unreliable. A few years prior to the discovery and development of the chemotherapeutic agents which have brought an exceedingly high percentage of the (now rare) cases of puerperal sepsis within the realm of controllability, there was a widespread financial depression. This socioeconomic factor was likewise a vector in discouraging large families because

children of that generation could not be assured by their parents of the necessities of life which were dependent upon the pecuniary stability of the family exchequer. At the present time, financial insecurity is not among the top five objections to personal motherhood voiced by women of child-bearing age.<sup>21, 20</sup>

As is generally known, the majority of the present-day queens of the movie capitol are mothers. Thanks to these Hollywood mothers and to the numerous women in all walks of the business, professional, and political world who have one or more children, motherhood is no longer regarded contumaciously by American women. Actually the principal deterrents to motherhood can now be grouped under the term *maternal injuries*, whether these injuries be due to psychopathologic changes incident to the maturation process, or to physical traumata which result from improper, hasty, or unskillful obstetrical manipulations.

In our enlightened present era, women marry younger than did their mothers. These women want not only one or two children—but several.<sup>14</sup> By obviating the objection cited hereabove, we can virtually guarantee these women who are so desirous of parenthood not only more babies, but healthier babies who can be welcomed into this beautiful land of ours with every reasonable assurance of safety.

### The Steel Hatband

There was a new baby born today,  
By obstetrical methods at present passé;  
His head was all bruised,  
His brain quite confused,  
Because brutal high forceps were forcefully used.

Did you ever try to wear a hat—for even a few minutes—whose band fit too

tightly? It wasn't a very pleasant experience, was it? Or, has any one of you whose head happens to be shaped more parabolically than average ever experienced the disconcerting discomfort of attempting to encase your cranium into the rigid type of hat such as the Maurice Chevalier sailer or the Al Smith derby? Since there is so much variation in the sizes and shapes of adults' heads, it is quite impossible to make of any rigid material a hat which can conform to the size and shape of every head. Although this author is duly cognizant of the fact that the blades of an obstetrical forceps when properly engaged do not occupy the same planes as does a hat when rakishly donned, it still seems just as reasonable to predicate a universal-sized rigid hat as an obstetrical forceps constructed so that it will conform to every infant's head. Of course, an obstetrical forceps made of any material other than a rigid substance would be an entirely useless instrument. How much intracranial trauma can be inflicted to the delicate structures inside the infant's calvaria by a forceps *properly* applied—not to even mention an improper application of this inflexible instrument!

Among experts at the use of obstetrical forceps, *none* who was interrogated listed *any* indication which would warrant the use of high forceps. Quite to the contrary, each was emphatic and vehement in his denunciation of the procedure.<sup>6, 25, 27</sup> Another panelist, though not an obstetrician, but a New York City surgeon who over a period of three decades has had ample experience in the performance of reparative procedures for rectification of both recent and remote untoward sequelae incident to obstetrical traumata, went so far as to

assert: "If I had the power, I would label the use of high forceps a criminal offense."<sup>11</sup>

A high forceps delivery is therefore too hazardous to both mother and baby to even warrant consideration by the modern doctor. This procedure stands universally and unmitigatedly condemned by even those who are most highly skilled in the use of obstetric forceps.<sup>4, 5, 6, 10, 16, 18, 20, 23, 25, 27</sup> Hence, insofar as our present discussion is concerned we may dispose of the subject of high forceps delivery by saying that this procedure along with the automobile crank and the moustache cup has been relegated to the desuetude it so justly deserves.

Some of the panelists were almost as vociferous in their maledictions about the use of mid forceps as of high forceps when speaking from the standpoint of maternal injuries.<sup>4, 5, 6</sup> Others averred that a mid forceps delivery should be undertaken only by those who had received highly specialized training, and who were therefore thoroughly experienced in the performance of this procedure.<sup>5, 8</sup> Another rarely justifiable hazard mentioned by several of the panelists who were interrogated concerning maternal injuries is the attempted use of the Kjelland forceps for the performance of the Scanzoni Maneuver in order to achieve rotation of the foetal head.<sup>4, 5, 10, 25, 28</sup>

By far the highest composite score computed from the replies of all the obstetricians interrogated concerning foetal injuries incurred during the process of childbirth was ascertained to be for traumata due to ineptitudes incident to mid forceps deliveries.<sup>10, 16, 18, 25</sup> This cause for foetal injuries was mentioned almost twice as frequently as the second-place cause.

## Preternatural Exigencies

"The slings and arrows of outrageous fortune."<sup>\*</sup>

Although breech presentations comprise only approximately 3% of the total of foetal presentations, this small segment accounts for an inordinately high percentage of the total infant obstetrical mortality. Every doctor is aware of the dangers which can, and too often do, eventuate because of breech presentations. Much has been written on ways and means for coping with deliveries of this type, but it seems that a satisfactory method for *safely* delivering breech-presenting babies per vaginam has not yet been found. One investigator who has performed the second greatest number of breech extractions (most of them immediately following internal podalic version) of any man in medical history, and who is considered by many the world's leading authority on this facet of obstetrics, has given much time and thought over a period of 30 years to the problems of breech presentations. He has concluded that a breech delivery per vaginam can be safely accomplished *only* if the baby is facing the front of the uterus with its hands folded across the top of its chest. Unless this condition is satisfied by proper x-ray examination, he now refuses to undertake a breech delivery per vaginam irrespective of the status of the mother's multiparity.

Because of the high incidence of compression injuries to the skull due to pressure from the baby's hand and/or arm during its antipodal passage through the birth canal, as well as brachial plexus injuries, this renowned obstetrician does not adjudge any other

<sup>\*</sup>Shakespeare, William: From "Hamlet", Act III, Scene I.

position (in a breech presentation) compatible with the baby's safety. This author has heard him assert one of his dicta numerous times: "To get a *living* baby is not good enough; what one must strive for is a *nice* baby, as well as one that is born alive." This criterion epitomizes his reasons for no longer attempting a breech delivery per vaginam if the child is in any position other than as described hereabove.<sup>20, 21</sup>

The second most frequently cited cause for foetal trauma incurred during the process of birth is anoxia.<sup>10, 13, 16, 20, 27, 31</sup> Foetal anoxia may result from prolongation of the second stage of labor, early rupture of the membranes with a sequential "dry birth," retarded dilation of the cervix, or impaired foetal circulation incident to one or several turns of the cord around the child's neck. The encephalic injuries to the child which ensue as a result of any or a combination of the above were regarded as portentous by all the panelists who were questioned about this matter during this study.

The supravention of a subdural hematoma in the newborn infant is often regarded too lightly. Instead, this finding should be deemed a major cause of irreparable encephalic trauma to the child.<sup>1, 10, 18, 25</sup> Irrespective of the reason for a subdural hematoma, this is an ominous sign which warrants immediate neurosurgical consultation.<sup>1, 13</sup> Although this unfortunate finding is an outward and visible sign, just how much brain damage lies covertly underneath, one can at the time this finding is first elicited only surmise.<sup>31</sup>

In addition to these sometimes unavoidable causes of foetal anoxia, the doctor himself may compound, or even initiate, these adversities by his haste

in improper application of manual pressure from above,<sup>25</sup> ill-advised use of chemical analgesics or anesthetics during the early stages of labor<sup>10, 13, 16</sup> and/or injudicious administration of oxytocics before the opportune time or under inauspicious conditions.<sup>16, 23, 25, 28</sup>

### More Ramifications Than an Octopus Has Tentacles

"Behold how great a matter a little fire kindleth!"\*

If the city in which you reside has a Community Chest, it is a safe guess that among the recipients of funds from this source are the National Cerebral Palsy Foundation and the Association for Control of Retarded Children. Both these altruistic organizations have received considerable radio and television publicity during recent years; and large sums of money have been donated by the American public for carrying on their praiseworthy work. No derogatory implications against either of these organizations are intended. But from the results of this study on birth injuries, it appears that we doctors should begin our campaign against these scourges right in our own back-yards.

One of the panelists interrogated during this study was a well-known neurosurgeon. He proffered some appalling information. He opines that 70% of Cerebral Palsy may be justly and reasonably attributed wholly to brain traumata incurred during the process of childbirth.<sup>1</sup> From another source it is learned that 0.35% of the total population of the United States is afflicted with varying degrees of Cerebral Palsy.<sup>2</sup> The present population of the United States

\*The Epistle of St. James, III: 5.

is 167,000,000.<sup>14</sup> By a process of simple multiplication, we thereby find that within the United States there are as many people afflicted with Cerebral Palsy as there are inhabitants of Buffalo, New York. If we doctors are in a large measure responsible for 70% of these unfortunates, we must consider that it is *we* who have founded "Cripple City" whose population is equal to that of San Antonio, Texas.

By applying the same process to Mental Retardation, the following transpositions are substituted: A nationally-known neurologist and psychiatrist deposes that 5% of Mental Retardation can be ascribed wholly to traumata incurred during the process of birth, plus an additional 5% of these unfortunates in whom encephalic damage imputable to vicissitudes of their births is at least an adverse contributory factor.<sup>9</sup> This gives us a total of 10% of Mental Retardation which is due either wholly or partially to birth traumata. It is believed that between 2% and 3% of the entire population of our country is afflicted with clinically evident gradations of Mental Retardation.<sup>2</sup> Let us use the lower of these figures (i.e. 2%) and compute the number of our citizens who are so unfortunate as to suffer from this malady. The figure which we obtain approximates the population of Chicago. Then, 10% of this figure—that percentage which is due to birth injuries—discloses that the population of "Dullard City" would comprise about the same number of souls as live in the city of Louisville, Kentucky.

By combining the residents of "Cripple City" with those of "Dullard City" we have a group of handicapped persons whose number equals the population of San Francisco. Ergo, it is no

small matter when we consider that the sad plights of a goodly percentage of these hapless people might have been averted, or at least materially mitigated, had less traumatic procedures been employed by the doctors who officiated at their births.

Nor is this all! If the average person be asked which of his special senses he prizes most highly, he unhesitatingly answers: "My eyes!" Should a person have only one useful eye, such a condition warrants no further discussion to explicate how highly he cherishes this one connecting link between his own most vivid areas of consciousness and the enchanting beauties he can perceive through this single functional window. As compared to the person who possesses two good eyes, the valuation which a person who has only one useful eye places on this sole small, but irreplaceable organ, increases by geometric progression. Although birth injury is not a major cause of amaurosis, amblyopia, and strabismus, it is nevertheless one of the causes of all these entities.<sup>21</sup> Most of the factors concerned in this cause of ophthalmologic disabilities can be prevented by avoidance of foetal traumata during the process and/or mechanism of birth. It has been shown that injuries to the eyeball are  $2\frac{1}{2}$  times greater in forceps deliveries than in spontaneous deliveries; and that such injuries are exceedingly rare in births by Caesarean Section.<sup>21</sup>

Based on this author's observations, the child who is the victim of a sub-clinical brain injury due to detectable degrees of anoxia incurred during its birth or, as more frequently occurs, to forceps delivery, is a child who almost from the very first hours of his life becomes a feeding problem. Certain

panelists interrogated failed to discern any correlation between birth traumata and infantile pylorospasm for which medical treatment sufficed and/or infantile pyloric stenosis which necessitated surgical intervention.<sup>7, 15</sup> However, other panelists who are faculty members of a well-known midwestern medical college were also interrogated on this matter during the course of this study. Although they offer no figures in substantiation of this hypothesis, they admit the possibility of a predisposition to infantile gastro-intestinal symptomatology in brain-injured children and deem the theory a matter worthy of scientifically controlled clinical study.<sup>3, 29</sup>

One well-known neurosurgeon ascribes greater significance to cerebral anoxia as a causative agent in pediatric neurological disorders than to hereditary factors.<sup>13</sup>

### **"The Secret of my Success is Charlie"**

*"Inventor and Revealer of Anaesthetic Inhalation Before Whom, in All time, Surgery was Agony, By Whom Pain in Surgery was Averted and Annulled, Since Whom Science Has Control of Pain"\**

The late Dr. Charles J. Reynolds (deceased 1944) of Buffalo, New York, achieved a record in obstetrical anesthesia which will probably stand for many years. He employed but two chemical agents for all his anesthetic purposes, namely: chloroform and ether. According to records still extant, he anesthetized some 15,000 women during the deliveries of their babies. Out of this number, only three anesthetic deaths occurred. One of these patients

succumbed because of severe cardiac decompensation in whom all complications which arise from this condition reached a climax at the onset of her labor. The second had a severe pyogenic infection of the urinary tract which could not be controlled by any method of treatment available at that time (this was prior to the sulfonamide and antibiotic era). The third of these patients who died during his active administration of an obstetrical anesthetic (but not necessarily because of his choice of the particular chemical agent which he employed)—and the *only* one to whom chloroform was being administered at the moment of her death—was in the terminal stage of cancer of the larynx at the time of onset of her labor.<sup>24</sup> With his chloroform inductions, the patients progressed smoothly and steadily to the stage of surgical anesthesia with a minimum of excitation. Deep anesthesia was mandatory for the operative deliveries which were performed on the majority of these patients. Dr. Reynolds was for many years the full time anesthetist for Dr. Irving W. Potter and his son, Dr. Milton G. Potter.

At that time (during the 20's and 30's) these indefatigable workers (i.e. the two Drs. Potter and Dr. Reynolds) were playing a major role in molding the specialty of obstetrical surgery into the well-grounded science as we know it today. After the completion of some especially spectacular obstetrical feat when all the doctors who had assisted with or witnessed the delivery had repaired to the surgeons' dressing room, Dr. Irving W. Potter would usually dismiss his performance with the succinct comment: "The secret of my success is Charlie." During that era, this author witnessed this series of events

\*Inscription on Tombstone of Dr. William Thomas Green Morton in Mount Auburn Cemetery, Boston, Mass. written by Dr. Henry J. Bigelow.

and heard Dr. Irving W. Potter's explanation numerous times for the successful outcome of a delivery fraught with many obstacles. The Drs. Potter were pre-eminent exemplars in the field of operative obstetrics who were always willing—indeed eager—to instruct those who were desirous of learning their art. Some of their methods were so utterly revolutionary that it was not until quite recently that their teachings were accorded general acceptance by the medical profession at large. However, Dr. Irving W. Potter seemed to be rather reluctant about accepting any personal credit for his noteworthy obstetrical accomplishments. He was wont to follow the Divine Edict: "Render therefore to Caesar the things that are Caesar's . . .",<sup>23</sup> which according to his personal translation was: "The secret of my success is Charlie."<sup>23, 24</sup>

Although a peerless master at administration of chloroform and ether for purposes of obstetrical anesthesia, Dr. Reynolds was a sort of social pariah who inveterately and incessantly indulged in the indelicate social impropriety of ruminating tobacco. Rarely was he seen without the tell-tale brown stains on his shirt, necktie, or vest (depending somewhat upon the hour and the season at which he was called upon to perform his ministrations with chemical anesthetics). To the amazement of the internes and special graduate students, the consternation of the nurses, and the chagrin of the Drs. Potter, Dr. Reynolds usually continued his mandibular exercises with his quid while in the delivery room just as rhythmically and as vigorously as he

did everywhere else. Because of Dr. Reynold's efficiency as an obstetrical anesthetist, this oafish solecism was tolerated. But in extenuation of Dr. Reynolds's uninterrupted proclivities with his "Brown's Mule", it must be truthfully affirmed that he did manage to hit the waste receptacle—at least most of the time.

Based upon the observations of Drs. Irving W. and Milton G. Potter during those years in which Dr. Reynolds anesthetized their patients by using only two chemical anesthetic agents, chloroform and ether *without the addition of oxygen* (forced into the patients' respiratory tracts through a closed re-breathing apparatus), another inference of extreme importance has recently been deduced. Dr. Reynolds always spoke disdainfully of anesthetic machines and opined that "such contraptions" had no place in obstetrical anesthesia. With his keen sense of humor undulled by the years, upon recounting these matters in 1953 while Dr. Irving W. Potter and this author were reminiscing, this now retired venerable octogenarian commented about as follows: "That tobacco juice with which Charlie bespattered the walls and floor of the delivery room must have been an exceedingly wholesome substance. Anyway, the babies *thrived* on it! During the days when Charlie was giving my anesthetics with chloroform and ether by the open-drop method without all those compressed gases attached to a complicated machine, it was *rarely* necessary to resuscitate any of the babies I delivered. Practically all those babies cried at birth. But now—resuscitation of the baby is the rule instead of the exception".<sup>24, 25</sup>

The import of this clinical observation has recently been amplified and al-

<sup>23</sup>The Gospel according to St. Matthew xxii:21.

most conclusively substantiated by workers in a specialty which, strangely enough, is far afield from operative obstetrics, namely: ophthalmology. For a long period of time, oxygen was considered a *sine qua non* in the prevention and treatment of retrolental fibroplasia in premature infants. Some workers have now convincingly demonstrated through properly controlled investigations that too high a concentration of oxygen aids and abets the supervention of this distressing entity.<sup>23</sup> The criticism has been frequently alleged that in more than 50% of the babies born via Caesarean Section, respiratory stimulation must be resorted to a few minutes after their birth. Although babies born by this type of delivery may cry lustily immediately after their removal from the uterus, it has been found that their respiratory functions soon diminish to such an extent that the babies' lives are in actual jeopardy. At present, anesthetics are usually administered through a closed system in which an ample supply of oxygen is forced in preparation for, and until the moment the baby is extricated from the uterus during the performance of a Caesarean Section. Perhaps this low concentration—or absence—of the *one* gas which is known to stimulate respiratory activity, carbon dioxide, may be the reason for the supervention of secondary respiratory failure in children delivered by Caesarean Section under these thoroughly oxygenated conditions. Possibly "Charlie" has bequeathed to posterity a boon which has so recently been verified by ophthalmology, and which may at some future date be rediscovered by obstetrics and/or pediatrics.

The finding of an anesthetist who can properly utilize, and who is willing to

undertake so old-fashioned a method of anesthetizing an obstetrical patient as by the mere administration of chloroform and/or ether by the open-drop technique has posed a perplexing problem at Dr. Milton G. Potter. He has had numerous disconcerting and indeed unpleasant experiences because of maldroit anesthesia since Dr. Reynolds's death. Dr. Potter still opines that improper anesthesia is usually the culpable factor when any of his operative deliveries "goes sour." He frequently summarizes his tribulations with modern obstetrical anesthesia as follows: "The man at the head of the table can ruin you."<sup>26</sup>

### A Paradox of Logic

"O judgment! thou art fled to brutish beasts  
And men have lost their reason."<sup>27</sup>

In no other branch of medical science is there encountered so much stubborn inflexibility to improvement as in the field of obstetrics. It is generally agreed that the founder of modern obstetrics was the ill-fated Hungarian, Dr. Ignaz Philipp Semmelweis. The revolutionary innovation that was the cornerstone of the new era in obstetrics which he heralded was merely a matter of simple hygiene and common decency. He advocated only the washing of the hands prior to the examination of the woman in labor. Even so simple a measure as that was not even accepted—but conversely, was repudiated!

The mortality and morbidity figures of the ward in which he demanded and enforced simple cleanliness of the hands among the medical students under his

<sup>27</sup>Shakespeare, William: From "Julius Caesar", Act III, Scene 2.

charge as compared to the statistics on these factors in another ward in the same hospital in which these measures of simplest decorum were not in effect should have convinced even the most recalcitrant loggerheads. But instead of approbation, Semmelweis's superiors—speaking from the standpoint of their relative positions in the area of politics, and not with reference to their respective standing in scientific perspicacity regarding human relationships—accorded him contempt because he was so bold as to proffer his timely suggestions. What was a far more garish blunder, their refusal to take heed of the measure which Semmelweis advocated, namely: making the washing of the hands prior to vaginal examination mandatory, could have done no harm whatsoever. But instead of being rewarded with advancement for his laudatory endeavors, Semmelweis was shamefully removed from his position in Vienna.

Posthaste he moved to Budapest where he repeated his simple experiment in manual cleanliness with the same phenomenal improvement in the prognoses of his parturient women. Yet he still remained "a voice of one crying in the desert."<sup>6</sup> Men in high position who were contemporaneously recognized as authorities in the field of obstetrics (among them, the Scanzoni of Scanzoni Maneuver fame) not only spoke derogatorially concerning Semmelweis's manual ablutions, but wrote derisively about the obliquity of the implications of such a practice. Many of the doctors of that era took the stand that this ill-bred (?) Hungarian, Semmelweis, was impugning their social

status as gentlemen by intimating that they (the doctors) might possibly have unclean hands.

It was not until fourteen years after Semmelweis's untimely death in 1865 that Louis Pasteur (in 1879) visually demonstrated the hemolytic streptococcus. Thereby were Semmelweis's observations validated, and his correct solution to the sinister problem of the transmissibility of puerperal sepsis before he actually knew the precise cause thereof was belatedly vindicated.

Let us contrast this disgraceful chapter in obstetrical history with a brighter narrative which pertains to another medical specialty. Let us briefly recount the rapidity with which innovations in the field of medical therapeutics "catch hold." In 1922, the isolation of the hormone, insulin, was the No. 1 medical news item of the year. During the next twelve months this life-saving measure for the control of diabetes mellitus was made available to every sufferer from this condition throughout the entire civilized world. Some 20 years after the introduction of insulin, the greatest medical achievement of the present century was proclaimed, namely: The discovery of penicillin. Thereby was ushered in the antibiotic era. Diseases which had formerly brought only despair and death to millions could be totally vanquished in a matter of hours. Not only did the medical men seize upon this (up until that time) incredible therapeutic agent, but the surgeons soon followed the lead of their internist confreres. Through the use of antibiotics those traditional and perennial enemies of the surgeon such as wound infection and peritonitis could be reduced to almost the vanishing point. Indeed much of the surgery which is to-

<sup>6</sup>The Gospel according to St. Matthew 11:3 and The Gospel according to St. Mark 1:3.

day considered commonplace would be impossible without the adjunctive administration of antibiotics. Despite the obfuscations of global war, ways and means for mass production and widespread distribution of this boon to suffering humanity were implemented. In a matter of almost weeks, antibiotics gained universal acceptance. Still later, cortisone gave the first ray of hope to millions of arthritics throughout the world. Immediately following the release of the news of its discovery, the demand for this medicament so far exceeded its possible supply from natural sources that methods for its synthesis had to be instituted. Progressive refinements have ensued so that there is now a far wider margin of safety as well as an increase in efficacy in the use of these products. This group of medicinals (i.e. cortisone derivatives and analogues) has afforded an incalculable reduction in human suffering.

During the latter part of the year 1846 in the City of Boston, Massachusetts, the greatest medical achievement since the discovery of the circulation of the blood (by William Harvey in 1628) was conclusively consummated. This, of course, was the demonstration of surgical anesthesia by the inhalation of a chemical. Not only was the death of pain achieved by this agent, but at the same moment the era of modern surgery was born. Surgeons throughout the world immediately took full advantage of this discovery and unanimously accorded their patients the blessings of this wonderful gift.

But what happened concerning anesthesia in the field of obstetrics?

At approximately the same time that Semmelweis in Austria was making his futile attempts to foist his methods for

control of puerperal sepsis upon the adamant and unbending medical faculty of his alma mater, James Young Simpson in Scotland was waging an uphill campaign in behalf of obstetrical anesthesia.

Just at that particular time it seems that Scotland had a super-abundant supply of articulate theologians. These literal interpreters of Holy Writ harangued against the use of any agent which would mitigate the pains of childbirth. They cited as Scriptural authority for their contention a passage from the very first book of the Holy Bible, specifically, Genesis III:16: "To the woman also he said: I will multiply thy sorrows, and thy conceptions; and in sorrow shalt thou bring forth children—." As are the majority of Scots, Simpson was canny and resourceful. Simpson, though not renowned so much in the field of theology as of medicine, nevertheless decided to fight the theologians with their own weapon. He stated that the very first surgical procedure recorded in human history was performed under anesthesia! He cited as his scriptural authority for such a brash statement another passage from the Book of Genesis, to wit, Genesis II: 21: "Then the Lord God cast a deep sleep upon Adam; and when he was fast asleep, he took one of his ribs, and filled up flesh for it." This rebuttal was therefore unanswerable by the men of the cloth. But Simpson's theological victory notwithstanding, it required the birth of a prince delivered of the reigning—but thoroughly anesthetized—Queen Victoria for obstetrical anesthesia to gain widespread general acceptance.

There are still some rugged fundamentalists—and much of their philosophy is indeed *rugged* for both the mother

and the baby—who doggedly insist that it is practically mandatory for a mother to give birth to her baby “Through the natural passage if it be at all possible.” However, in almost the same breath, the majority now approve (perhaps “tolerate” is a more exact term) obstetrical anesthesia for mitigation of the mother’s suffering incident to the process and/or mechanism of childbirth. But just how much thought do these rugged fundamentalists accord the baby? By the aberrant process of reasoning used by these pseudo-philosophers, it appears that their commiserations for the well-being of the baby are almost totally eclipsed by their considerations for the mother. Although it most assuredly is *not* the purpose of this treatise to condemn the proper and judicious use of obstetrical anesthesia, it has nevertheless been herein explicated that its employment is fraught with formidable dangers, principally on the part of the baby. Another question arises: Just how *natural* a procedure is it to have a steel forceps placed inside the birth canal and the baby’s head squeezed between its blades?

Forceps deliveries have herein been shown to be exceedingly hazardous from the standpoints of *both* the mother and the baby. Hence this “birth through the natural passage if it be at all possible” philosophy is truly a paradox of logic.

### Cutting the Gordian Knot

“Veni, vidi, vici!”\*

Obviously the advocacy of birth by Caesarean Section as a *routine* procedure is no more rational than the promulgation of the suggestion to have a full-mouth extraction of teeth with the

substitution of dentures for their natural counterparts. However, if presence of the natural teeth becomes a hazard to the general health of their owner, and/or these natural teeth become incapable of performing their intended function, then their extraction and replacement by dentures is the logical solution to such a problem. Likewise, if *any* doubt exists concerning the ability of the mother to *easily* deliver her baby spontaneously per vaginam, and/or any factor presents itself which indicates that any traumatizing procedure may have to be employed which might jeopardize the baby’s ultimate safety, then the performance of Caesarean Section should be unalterably elected.

Is it any more *unnatural* for a child to be born by Caesarean Section than by recourse to forceps? The answer to this question is a stentorian “NO!” Furthermore, Caesarean Section is a much safer procedure than forceps delivery. One panelist, though very dextrous in the use of obstetric forceps, no longer considers the use of mid forceps—let alone high forceps.<sup>6</sup> Another panelist equally adroit at the use of forceps accords Caesarean Section second choice when a forceps delivery can not be accomplished *with ease*.<sup>27</sup> Caesarean Section has been made so safe a procedure through the magic of modern surgical techniques that more and more modern doctors are abandoning the outmoded forceps for the safe and sane Caesarean Section. In order to show just how safe and innocuous a procedure Caesarean Section has now become, the following direct quotation by the Chief of the Obstetrical Service of the Millard Fillmore Hospital in Buffalo, New York, is offered in evidence:

“During the past 10 years 2200

\*Plutarch: Apophthegms of Kings and Great Commanders, Caesar.

Caesarean Sections have been performed at the Millard Fillmore Hospital in Buffalo, N. Y. The only maternal death which resulted therefrom occurred August, 1951. This patient who was near term was admitted to the hospital in an iron lung because she had unfortunately contracted the bulbar type of poliomyelitis. The Chief of the Obstetrical Service performed Caesarean Section under local anesthesia. Insofar as is now known the child is still alive and well. However, the mother succumbed to pneumonia on the 5th post-operative day.

"This series of Caesarean Sections was performed by the 30 doctors on the Obstetrical Staff of this hospital. The anesthetic agents employed ran the entire gamut of all the accepted types and modes of administration of the generally approved pharmaceuticals used for anesthetic purposes. However, in an indeterminate percentage of this total, the actual mechanics of the operative procedure may have been performed either in whole or in part by the Residents in Obstetrics under the surveillance and guidance of the Attending Staff Obstetricians.

"This polio case was the only maternal death in the Sections performed in the past 10 years. Post operatively her bronchi filled with mucous plugs and caused her death on the 5th day. Postmortem showed a normal healing uterus and peritoneum."<sup>19</sup>

A criticism frequently leveled against elective Caesarean Section, particularly in primiparae, is the inevitability of the

sequential uterine scar. The presence of such a scar was thought to so weaken the wall of the uterus that it would be mandatory to deliver all subsequent children by Caesarean Section lest rupture of the uterus supervene during the course of labor. This objection has been nullified by the development of a surgical technique through the use of which the uterine musculature heals with a thick, firm scar. This method consists of closing the incised uterus with a *single row* of interrupted silk sutures 2.0 cm. apart through the serosa and the outer one-third of the uterine musculature.

This method for closing the incised uterus is presented in lieu of the older method in which three rows of catgut sutures were placed in the uterus following Caesarean Section. This author has had occasion to examine several of these scars at the time subsequent Caesarean Section was performed on certain of these patients because of cephalopelvic disproportion or other primary indications for Caesarean Section. In *no instance* did he elicit the usual thin scar near the serosal surface of the uterus with the characteristic underlying trough directly beneath. This type of closure has the additional advantage of minimizing the likelihood of secondary post-partum uterine hemorrhage which occasionally ensues because of necrosis of the area of the uterus through which the lower two layers of catgut sutures are placed when the use of the three layers of catgut closure technique has been employed. Furthermore, the lochia is materially reduced in patients who have had this single row of interrupted silk sutures type of closure as compared to the quantity and duration of the lochial flow among those patients in

whom the three rows of catgut sutures type of closure is utilized.

Insofar as it could be ascertained during the course of study undertaken to obtain authentic material for this treatise, the earliest religious approval of Caesarean Section was affirmed by the Council of Cologne under Archbishop Siegfried about the year A. D. 1230. By the action taken on this matter by that ecclesiastical gathering "opening the womb" was not only approved, but advocated, in order to obtain a living baby in order that it would be possible for the child to receive the Holy Sacrament of Baptism.<sup>17</sup>

What percentage of births *should* be accomplished by Caesarean Section? The limits proscribed by the Joint Commission for Accreditation of Hospitals is from 3% to 5%. This figure is apparently based on the thinking of certain of those rugged fundamentalists (i.e., the proponents of that trite "birth through the natural passage if it be at all possible" philosophy) rather than on the practices of the well-trained modern doctor. One of the panelists who was interrogated on this matter as to an equitable percentage of births by Caesarean Section opined that 7% would be a fair proportion if proper attention to all factors for safeguarding the safety of both the mother and the baby were accorded the amount of consideration they justly deserve.<sup>12</sup> The panelist who was questioned concerning the surgical aspects of remote complications incident to traumata incurred during the process of childbirth stated that Caesarean Section was far less harmful than for-

ceps delivery. Although he offered no percentage figure, it is logical to conclude that due consideration of this factor would further increase the percentage of advantageous Caesarean Sections.<sup>11</sup> Then let us add those breech presentations who *should* be delivered by Caesarean Section because they lie in intra-uterine positions other than facing the front of the uterus with their hands folded across their chests.<sup>20</sup> By combining all these figures our total reaches at least 10%—an approximation which represents the minimal percentage of all births which should be accomplished by Caesarean Section in order to afford an equitable margin of safety from birth injuries to both mother and baby.

Simply because the history of obstetrics is as ancient as the history of mankind, is no reason for the modern doctor to employ antiquated methods in its practice. Ways and means for reducing the number and severity of birth injuries, many of which were formerly considered inevitable, have been developed and handed to the modern doctor "on a silver platter." It is therefore up to us to utilize these modern techniques. So let us as far-sighted modern doctors contribute our bit to human happiness by safeguarding our mothers from unnecessary childbirth traumata, and simultaneously by averting unwarranted injuries to our babies just at the time they are being born. To do so will give these new citizens a sporting chance and a fair start on their life's journey in this complex, but beautiful and interesting world, which God has vouchsafed them.

#### Panelists

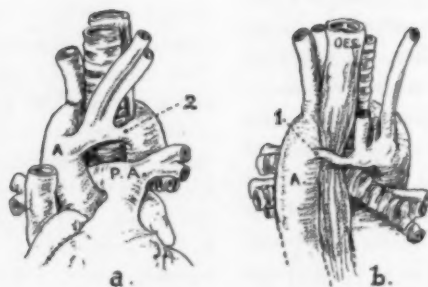
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715 North Adams Street

## Clini-Clipping



- a. Most common type of double aortic arch—2, is the ant. segment of the aortic arch.
- b. Double aortic with—1, rare posterior segment of the aortic arch. (after Potts)

# Chronic Relapsing Pancreatitis

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## Part 1

Although many aspects of chronic pancreatic inflammation have been recorded since 1667 when Graaf first noted pancreatic calculi, it remained until 1946 for Comfort and associates to describe the distinct clinical entity of Chronic Relapsing Pancreatitis. It is a syndrome characterized by recurrent attacks of upper abdominal pain, by disturbances in function of the acinar and islets cells with symptoms of deficiency of pancreatic digestion and insulin production and by certain sequelae. Comfort pointed out that the different types of chronic pancreatic disease were but variations in the disease's manifestations and different phases in a continuing pathologic process. Despite recent investigations showing that the disease is not rare and its symptom complex not ill defined, it remains a diagnosis that is usually missed. An accurate diagnosis is difficult especially during remissions, but proper awareness of the entity and its manifestations should lead to the diagnosis.

**Incidence** The approximate incidence is unknown since it is frequently not recognized clinically and a large

autopsy series with routine careful examination of the pancreas has not been performed.

**Sex** The majority of reports have a predominance of males in a rough ratio of 2 to 1, but large series by such reliable investigators as Catell have an almost even sex distribution. This sex incidence is in contradistinction to the predominance of females in cholecystic disease and rules against etiological relationship.

**Age** The majority of cases occur between 30 to 50 years, but Gambill and Comfort in one series of 27 found it to vary between 10 and 75 years with many less than 30. Thus pancreatitis may appear at a younger age than does cholecystic disease in the usual case. The age incidence also parallels that of acute pancreatitis.

**Family History** There does not appear to be any familial incidence.

**Type of Individual** As a group these patients are not obese, as with cholecystic disease. Obesity at the onset is less common than in acute pancreatitis and weight loss becomes marked with progression of the disease.

Alcoholism is so frequent that it is generally presumed to precipitate or aggravate the attack. Chronic alcoholics

From the Journal Club Conferences, New York University-Bellevue Medical Center Post Graduate Medical School, New York, N. Y.

were reported in 30 to 70% of cases with most series tending toward the higher incidence. In studies of alcoholics at large, Clark, in 150 consecutive necropsy cases dying of alcoholism, found 27 with pancreatitis. Wiener and Tennant noted chronic pancreatitis in 47% of 41 cases of chronic alcoholism. In many patients the onset of attacks promptly followed intake of alcohol, and at times the alcoholism takes the form of periodic bouts coinciding with episodes of pancreatitis.

### Signs and Symptoms

**Pain:** Typically pancreatitis begins with an acute and severely painful seizure and this remains the most frequent and arresting manifestation throughout the course of the disease.

**History**—The duration of pain varied from days to 35 years, and the average was about 5 years in most series. Of 29 cases, Comfort found that the average period from the onset of seizures of pain until the diagnosis was made was 4.8 years.

**Character**—The pain is usually described as colicky or crampy, as well as steady, severe, constant, knifelike. Most observers conclude that it is prone to be steady rather than colicky as in biliary colic, but the character of pain does not indicate the nature of the disease.

**Location**—The primary or initial site of pain is in the epigastrium in over 50% of cases, with the common occurrence (over 25%) in the right upper quadrant, resulting in the confusion with biliary colic. Although pain in the left upper quadrant is most suggestive of pancreatitis, it is relatively uncommon as a primary site, as are diffuse and lower abdominal pain and back pain.

**Radiation**—Frequently it does not

radiate at all, but the usual extension is to the back at the lower thoracic or uppermost lumbar vertebrae. Extension to the left hypochondrium is characteristic when present, but less frequent than many authors have implied. The right scapular area and right hypogastrium, the entire abdomen, the left shoulder and left anterior chest are other sites.

**Severity**—Violent in degree, the pain of pancreatitis is not only as severe as biliary colic but most often lasts much longer. An indication of its severity is the need for repeated injections of morphine in large doses for the relief of a single attack (which at times gives only partial relief), as well as frequency of morphine addiction. 58% of patients operated on at the Lahey Clinic were addicted to narcotics. In a small number of cases the pain is relatively minor and the intensity may vary greatly during the various stages of the disease.

**Frequency and Duration**—The frequency varies greatly not only among patients, but in individual patients. The extremes are from several times daily to 10 year intervals. A tendency to increasing frequency with lapse of time is a common feature. Duration is from hours to 3 weeks. The usual persistence for several days instead of hours, differentiates from biliary tract pain.

**Etiology**—Several mechanisms producing pain are postulated. Actual involvement of afferent nerves by the inflammatory process is probably the basis for much of the extreme pain. Distention of the biliary and/or pancreatic ducts due to obstruction may give referred pain to the right (biliary) or left (pancreatic). The irritation of the inflammatory exudate in contact with the parietal peritoneum may result

in the pain of an acute episode. Some of the more persistent pain is undoubtedly due to reflex motor disturbances of the upper gastrointestinal tract with spasm of stomach and small bowel.

**Precipitating Factors**—Food and alcohol frequently aggravate the pain. Fatigue, exercise and emotional distress are also commonly mentioned by patients. Some patients appear to obtain relief by sitting with body flexed as in carcinoma of the pancreas.

**Nausea and Vomiting**: This usually occurs after the onset of abdominal distress and is more persistent than in cholecystic disease. Reflex vomiting from duodenal obstruction persists.

**Food Intolerance and Dyspepsia**: Present in half to 100% of cases in various series, dyspepsia is most marked for fried, greasy and fatty foods. Bloating, eructations or vague abdominal distress usually begin shortly after eating and are least before eating. Small frequent feedings prevent much of the distress.

**Chills and Fever**: Chills often usher in an acute exacerbation and fever is present in half of the acute attacks. Chronic low grade fever, persisting for months, is occasionally noted with weakness and lassitude, and other chronic fevers must be differentiated.

**Weight Loss**: At the Lahey Clinic this averaged 23 lbs., but it was found to be less marked in most series, though frequent. The anorexia, fear of eating, alcoholism, the loss of fats and protein with negative nitrogen balance due to deficient pancreatic secretion, and hidden diabetes are all significant.

**Jaundice**: Recurrent, mild jaundice usually sub-clinical, appeared in from one quarter to one half of reported cases. Rarely does it appear to be the

result of common duct stone, as cholelithiasis when present (10% of cases) is usually in the gallbladder. Fibrosis at the ampulla of Vater or compression of the intrapancreatic portion of the common duct cause obstruction, but often the jaundice is due to accompanying hepatocellular disease.

**Hemorrhage**: Commonly unappreciated as a manifestation of pancreatitis, hemorrhage in the form of melena or hematemesis was noted by Muether in 23% of 58 cases. Although less frequent in other series, this surprisingly high incidence would indicate that pancreatitis should be considered when evaluating gastrointestinal bleeding. X-ray studies of the gastrointestinal tract are negative in almost all cases. The true cause is unknown, but hemorrhagic gastritis has been observed and is likely secondary to the large alcoholic intake or contiguous inflammation from the pancreas.

**Diarrhea**: Intermittent diarrhea is a frequent symptom, and of diagnostic importance. Stools are typically bulky and fatty, and the fat is found floating on water. The usual transient occurrence after an episode of pain would indicate a temporary blocking of the pancreatic duct with resulting steatorrhea. Chronic pancreatic deficiency occurs as the disease progresses and steatorrhea may persist. Marked nitrogen loss occurs with the steatorrhea and long periods of negative nitrogen balance appear.

**Constipation**: Often frequent and severe, it may also alternate with bouts of diarrhea. It probably results from decreased food intake, reduced dietary fat and narcotic use.

**Diabetes Mellitus**: Frank, permanent hyperglycemia develops in about one

third of cases. A late manifestation, diabetes denotes extensive pancreatic destruction. It tends to be mild and is frequently latent. Temporary islet cell disturbance with transitory hyperglycemia and glycosuria occurs, but much less frequently than does transient steatorrhea. The absence of glycosuria should not be depended on to signify absent diabetes, and a routine glucose tolerance test is indicated. If diabetes appears in the presence of chronic, progressive upper abdominal pain, chronic pancreatitis must be considered.

**Physical Signs:** Physical findings are noteworthy for their paucity between acute attacks. As a complication, an epigastric mass may be felt which is usually a pancreatic cyst or enlarged pancreas. Frequently the tender mass will suddenly appear after an acute episode. Although the incidence of a small palpable mass in carcinoma of the pancreas is about 30%, they are not common in chronic pancreatitis. Hepatomegaly and mild epigastric tenderness are not uncommon.

During acute attacks all the signs of acute pancreatitis may appear. Marked tenderness and muscle spasm in the epigastrium are common; the rigidity may vary, but rarely is as marked as in perforated viscus. Ileus, unlike in perforated ulcer, is not present early but peristalsis diminishes and abdominal distention appears later. Shock, though uncommon, may appear with severe pancreatic necrosis. Slate blue discoloration of the umbilicus (Cullen's Sign) and bluish discoloration of the flanks (Grey-Turner's Sign) are rare and late manifestations.

## LABORATORY DATA

**Tests of Acinar Function** Serum Amylase and Lipase—are elevated during

acute episodes in about one third of cases, but rarely between seizures. Late in the disease with extensive destruction low values can be obtained. The amylase usually becomes normal in 3 to 4 days post attack, but lipase is often still elevated.

**Stools**—The percentage of fat to dry weight is frequently increased. The level of split fats is much decreased and mostly neutral fat is found, which differs from sprue. Creatorrhea may also occur, and large numbers of undigested muscle fibers are found on microscopic examination.

**Secretin Test**—Lowered values for volume, bicarbonate, amylase and lipase in the duodenal contents after intravenous secretin are present in most cases. Enzymatic reduction is the first to be diminished and decreases as the disease progresses.

**Tests of Islet Function** Glycosuria—It is occasionally present but often transient.

**Fasting Blood Sugar**—This was greater than 120 mg. in about one quarter of cases in one series.

**Glucose Tolerance Test**—An elevated curve was present in the majority of cases performed, but was not routinely done in any series.

## Tests Other Than Pancreatic Function

**Blood**—Slight hypochromic anemia, especially in advanced chronic disease was not uncommon. Infrequent macrocytosis was associated with jaundice or hepatitis. During remissions, leukocytosis was rare, but was present in varying degree in about 50% of the acute attacks (up to 25,000) with a shift to the left.

**Urinalysis**—Occasionally this disclosed albuminuria, casts, a few red cells and with jaundice, bile.

**Sedimentation rate**—Elevations are found in an acute seizure and for some time afterwards.

**Serum Bilirubin**—Over 75% of Gambill's cases had bilirubinemia; though below 50% in other series it emphasizes the frequency of latent jaundice.

**Gastric Analysis**—Normal.

**Tests Useful in the Acute Attack**  
**Plasma antithrombin**—Serum trypsin cannot be measured directly because blood contains antitrypsin, but Innerfield states that the plasma antithrombin titer reflects the blood trypsin. He found it elevated in acute pancreatitis and rarely in chronic pancreatitis, but much controversy as to its validity exists among various investigators.

**Peritoneal Fluid Amylase**—Amylase in peritoneal fluid, obtained by small needle paracentesis, may remain elevated 2 to 4 days after the blood level returns to normal. A reddish color may indicate the hemorrhagic form of pancreatitis.

**Serum Calcium**—Occasionally hypocalcemia occurs, particularly in hemorrhagic pancreatitis. The escaped lipase splits the fatty acids, which react with ionized calcium and are deposited as insoluble soaps. Values are usually lowest about the sixth day, and may be low enough to result in clinical tetany.

### Roentgenologic Data

**Chronic Pancreatitis:** The most helpful sign when present is a calcareous deposit. This includes calcifications in the pancreatic parenchyma, calculi in the pancreatic ducts, and calcifications in pancreatic pseudocysts or cysts. Most commonly mistaken for pancreatic calculi are renal stones, calcium gallstones, and calcifications in the aorta, renal or splenic vessels. Usually multiple calculi

are present, but occasionally a few small calculi or a solitary stone which may be to the right of the spine can only be surely differentiated after visualization of adjacent organs. Oblique and lateral views or a duodenal tube to outline the sweep may be helpful in further studies.

Localized masses in the pancreas or parapancreatic area are due to pseudocysts or abscesses and may produce an increase in the mid-line retrogastric soft tissue diameter.

Disordered motor function of the small bowel is a non-specific results of pancreatic steatorrhea. Cholangiography may show an irregularly narrowed lower common duct in its pancreatic portion, with a dilated distal segment. The distal duct often is bluntly occluded and a stone may be present there. An enlarged liver may be seen.

**Acute Exacerbations:** In the duodenum, as Poppel has pointed out, the papillary sign, an enlarged, edematous papilla of Vater, is the earliest sign of an acute episode. Later occur changes in duodenal motility, altered peristalsis, local spasm and changes in barium distribution; widening of the duodenal loop with pressure on its inner border occurs still later and progresses to a local or generalized ileus.

The stomach initially shows spasticity and irritability. Later, elevation, anterior displacement and pressure on the greater curvature by the enlarged pancreas occurs. Increased density of the pancreas and masses in the parapancreatic area may be present.

Cholangiography may reveal reflux of dye into the pancreatic duct, a significant finding as regards the etiology of this process. The biliary tract may show calculi or enlarged gallbladder.

The colon, jejunum and ileum show

spasm and later edematous mucosa.

Fixed diaphragms, signs of subphrenic collections, pleural effusions, and Fleischner atelectasis may be seen in the chest.

The left psoas shadow and left kidney may be obscured due to local edema or fluid.

**Diagnosis and Differential** The diagnosis of a classical syndrome of chronic pancreatitis is not difficult. Recurring, severe upper abdominal pains with the appearance of diabetes and diarrhea characterized by bulky, fatty stools make a firm diagnosis. If the epigastric pains are frequent, last several days and occur in the left upper quadrant and left costovertebral angle, the diagnosis becomes more certain. Pancreatic calcification on X-ray with steatorrhea and creatorrhea on stool analysis or an abnormal secretin test, clinches the diagnosis. Finally, if pancreatitis is present, the primary nature of the disease is proven by excluding disease of neighboring organs.

The greatest difficulty appears when the only symptom is recurrent epigastric pain, especially during remissions. It is most likely to be overlooked in the unusual case with only mild pain; in this case the diagnosis will be made only if steatorrhea appears, if a fortuitous X-ray shows pancreatic calculi or if increased serum lipase or amylase are found. During an acute attack the diagnosis is made with greater ease, but it may be necessary to await improvement in the patient's condition before X-ray studies of pancreas, gallbladder, stomach and duodenum can exclude other pathology, or show pancreatic calculi. However, the frequency with which the diagnosis is made in such cases will depend largely on the clinician's aware-

ness of pancreatitis as a cause of pain in the upper part of the abdomen.

Chronic relapsing pancreatitis, as well as disease of the biliary and gastrointestinal tract, kidneys and heart, should be suspected in every case in which there is a history of recurrent attacks of pain in the upper part of the abdomen. Chronic pancreatitis will be confused with duodenal and biliary tract disease if right upper quadrant and right back pain are present. But pancreatitis or other complications of cholecystic disease must be suspected where the attacks last more than a few hours, if the pain repeatedly recurs after morphine, and when the pain is steady and gradual in development and cessation. If an obstructed biliary tract due to the pressure changes of pancreatic enlargement occurs, cholecystic disease may be mistakenly diagnosed. However, the duration, severity and location of the pain differentiates from biliary colic.

Hydronephrosis, duodenal ulcer and intermittent intestinal obstruction are excluded by a careful history and laboratory tests. Perforated peptic ulcer and intestinal obstruction are the second most frequent conditions confused with acute exacerbation of chronic pancreatitis. More frequent use of amylase and lipase values and intestinal deflation by tube in these cases may prevent harmful surgery. A duodenal deformity secondary to pancreatitis or adhesions from adjacent structures may be mistaken for a duodenal ulcer, on roentgen studies.

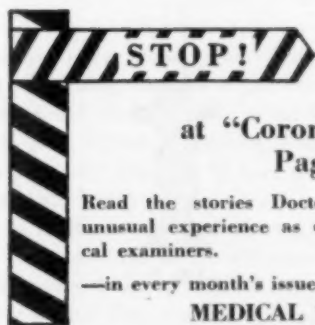
Carcinoma of the pancreas or of the ampulla of Vater may cause attacks of pancreatitis, indistinguishable clinically and even at operation, from chronic pancreatitis. Operative biopsy of fi-

brotic appearing pancreatic masses is mandatory. Usually the progressive nature of carcinoma makes the diagnosis clear. Infrequently retroperitoneal tumors simulate attacks with the same location and severity of pain. Excretory urograms may diagnose the retroperitoneal neoplasm.

Non-tropical Sprue may be confused if steatorrhea is present, although this is the only similarity between them. Deficiency states very rarely reach the stage of clinical recognition in pancreatitis. Macrocytic anemia and hypoproteinemia occur only with hepatic disease in pancreatitis. The serum protein, calcium and phosphorus, and plas-

ma lipoids are usually normal in pancreatitis, and nutritional edema or tetany do not occur. The pain of pancreatitis rarely can be confused with that of Sprue. Jaundice, diabetes, and pancreatic calcification almost never occur in non-tropical Sprue, and pancreatic steatorrhea is usually associated with calculi or diabetes, or both. The small bowel deficiency pattern on X-ray appears in both diseases. The amounts and types of stool fat and nitrogen may be so similar that one cannot differentiate. The secretin test in Sprue may show some diminished secretion, but the great diminution of pancreatitis rarely, if ever, occurs.

*(To be concluded next month)*



at "Coroner's Corner"  
Page 29a

Read the stories Doctors write of their unusual experience as coroners and medical examiners.

—in every month's issue of  
**MEDICAL TIMES**

## **Instruments of the Classic Type for Forceps Deliveries**

The physician must be thoroughly familiar with the various types of forceps, and with their advantages and disadvantages in order to select accurately the appropriate instrument. The blades of the forceps may be solid or fenestrated, but the latter is the style of choice. The blade is connected to the shank at an angle which corresponds to the curve of the pelvis; a lateral or cephalic curve corresponds to the shape of the child's head. The tip of the blade and the portion near



**FIG. 1**



**FIG. 2**



**FIG. 3**



**FIG. 4**

From **FORCEPS DELIVERIES**, by Edward H. Dennen, M.D., Professor of Obstetrics and Gynecology, Director of Department and Attending Obstetrician, New York Polyclinic Medical School and Hospital. (Publisher—F. A. Davis Company, Philadelphia, Pa. \$6.50)

the shank are designated as the toe and heel. From time to time, various types of fixation methods to keep the blades from slipping have been employed, devices rarely needed with the correct type and application. Recently operators have favored a sliding lock.

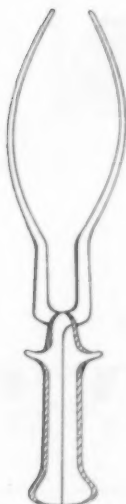


FIG. 5



FIG. 6



FIG. 7

While all forceps, of necessity, consist of two blades connected to a handle by a shank, two types are considered classic, and the countless modifications of forceps that have appeared over the years follow the principle of the *Elliot* or the *Simpson*. These instruments may be of simple construction or, as in some cases, extremely complicated in design. Frequently modifications are of a minor nature, but many of them have a particular feature which fulfills a specific need.

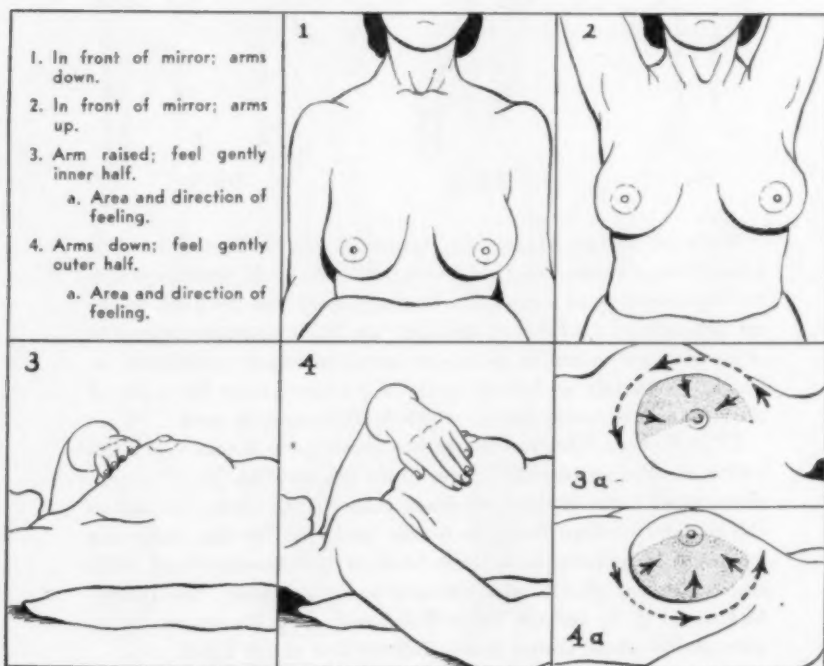
**Elliot Forceps.** This instrument has overlapping shanks which impart a short round cephalic curve to the blades (Fig. 1). The more pronounced curve of this instrument makes it the choice for use on the round unmolded head. It is also preferred for the wandering maneuver of applying the anterior blade to the transverse head, while the overlapping shanks offer less resistance to rotation. The Tucker-McLane (Fig. 2) and the Bailey-Williamson (Fig. 3) are two of the instruments whose design closely follows that of the Elliot.

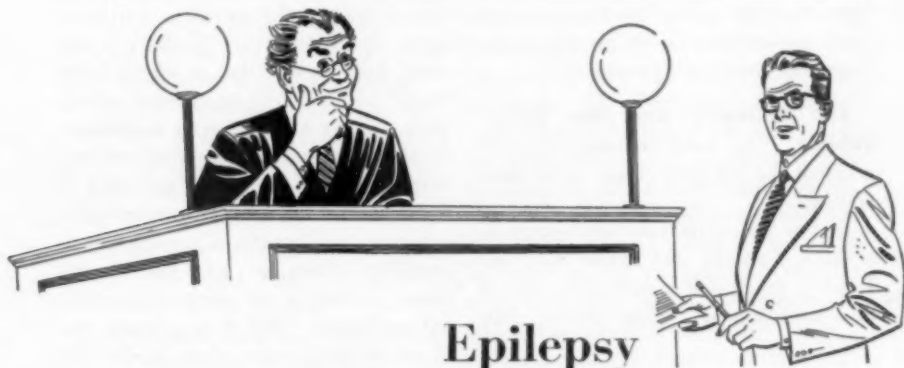
**Simpson Forceps.** The differentiating principle of these forceps is the parallel separated shanks which produce a long tapering cephalic curve for adjustment to the long molded head. The Simpson instrument as originally used belonged to the more complicated type of

construction (Fig. 4). A modification which combines the long cephalic curve with a simplicity of construction is the DeLee-Simpson (Fig. 5). Two other types which have found favor are the DeWees (Fig. 6) and the Good (Fig. 7).

## Clini-Clipping

### SELF EXAMINATION FOR TUMORS OF THE BREAST





## Epilepsy and the Law

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Epilepsy is characterized by repeated disturbances of consciousness and almost invariably some motor or psychic abnormality of behavior associated with amnesia. There are three major types of epileptic seizures: grand mal symptomatized mainly by serious convulsions; petit mal characterized by momentary unconsciousness; and psychomotor seizure which is distinguished by amnesia and odd, often maniacal, behavior. While amnesia is common to all three types of seizure, it is most significant in the third type which is distinguished by mental rather than motor phenomena. A fourth classification, traumatic or Jacksonian epilepsy, overlaps grand mal and petit mal epilepsy in its symptoms. Its origin is injury to the brain.

The convulsions suffered by the epileptic may result in serious injury, often to the epileptic himself. The legal sit-

uations which thus arise are many. Was the epileptic negligent in undertaking certain activities, such as driving a car? Was the employer negligent in hiring him for certain types of work? Was injury to the epileptic caused by his disease or by the negligence of another?

Cases of traumatic epilepsy create further legal questions: ones based on matters of fact for which the court must depend primarily on the physician: was the epilepsy caused by the accident? will epilepsy develop in the future by virtue of a head injury? what is the extent of plaintiff's disability? to what extent can his disease be alleviated by drugs?

The amnesia and temporary derangement incident to a psychomotor seizure may result in brutal crimes over which the patient has no control or even subsequent recollection.

Medicine has made great strides in

the determination of the nature of epilepsy and in the alleviation of its symptoms by drugs. The law has not kept pace: particularly in its eugenic marriage and sterilization laws.

**The Epileptic and the Motor Vehicle** The most common form of accident the epileptic causes is an auto accident.

In the Wisconsin case of *Eleason v. Western Casualty and Surety Co.*,<sup>3</sup> an epileptic truck driver suffered a period of unconsciousness while driving, lost



control of his truck and injured plaintiff. Although the truck driver was ignorant of his epileptic condition, he was aware that he was subject to fifteen minute fainting spells. The court ruled that driving a truck under these conditions, thus endangering the lives of others, was negligence as a matter of law. Negligence in this case was not a question of fact to be determined by a jury. Significant in this decision was the Wisconsin law forbidding the issuance of a driver's license to epileptics.

The law employs more rigorous tests in determining responsibility of the epileptic in a case of criminal negli-

gence. In *People v. Freeman*,<sup>2</sup> a California case, the defendant, with a history of epilepsy, felt unwell at a friend's house and left saying: "I think I can make it home and that is where I belong."<sup>3</sup> He suffered an epileptic attack while driving home, causing a collision in which one person was killed and another injured. The court said that if the defendant knew of his past epileptic condition, and was in a normal mental condition when he left his friend's house, driving a car constituted criminal negligence. But if he already was in an epileptic state when he left the house, he was not responsible for his actions since one of the requisites of a criminal act is knowledge or consciousness of that act despite the fact that California law, similar to that of Wisconsin, forbids epileptics to drive. Defendant's mental condition when he left the house was a question of fact for the jury.

Most states have laws regulating the issuance of drivers' licenses which prevent epileptics and others such as the insane and chronic alcoholics from receiving licenses. Nine states forbid the issuance of drivers' licenses to all epileptics. Fourteen states, including New York, require special examination and individual attention prior to the granting of licenses to epileptics. In thirteen, medical consultation and special examination is part of the epileptic applicant's test. In California and New Jersey, doctors must report the names of their epileptic patients to the Motor Vehicle Bureau so that the epileptics' licenses may be cancelled.

In Pennsylvania, Irwin, an epileptic, appealed from a lower court decision suspending his driver's license. In upholding the decision, the court said:

"There will, no doubt, be common agreement that a person afflicted with epilepsy is incompetent or unable to exercise reasonable and ordinary control over a vehicle on the public highway."<sup>4</sup> The Court indicated, however, that armed with a doctor's certificate stating that the epilepsy was under control, the petitioner would be re-eligible for license. Pennsylvania has consistently refused to issue licenses to epileptics unless a 3 to 5 year period of freedom from attacks can be proved.

Third persons may also be judged guilty of negligence in placing cars in the hands of epileptics.

In *Golombe v. Blumberg*,<sup>5</sup> a parent purchased a car for his adult epileptic son. The parent was held liable for a subsequent accident. The court held that it was negligent to endanger the lives of others by placing a potentially dangerous instrumentality in the hands of an epileptic.

In *Lucas v. City of Juneau & Sears, Roebuck & Co.*,<sup>6</sup> the City was liable for an accident caused by an epileptic ambulance driver employed by it when he lost control of his ambulance during a fit.

A Tennessee court held that it was a question for the jury whether a taxi company used due care in hiring its drivers when one of them caused an accident during an epileptic attack.<sup>7</sup> In *Eleason v. Western Casualty and Surety Co.*,<sup>8</sup> discussed above, the employer was not liable since it had made reasonable investigation and was unaware of the fits to which its employee was subject.

**Liability of Third Persons to the Epileptic** *Stasel v. American Radiator and Standard Sanitary Corporation*<sup>9</sup> was a 1955 case in Workmen's Compensation. The employee, Stasel, was in-

jured during an epileptic fit by falling either on a hot stove or hot sand. Stasel was unaware that he was afflicted with epilepsy of the grand mal type. The Board held that the injury was compensable. The Workmen's Compensation Act said the Board was not limited to employees in good health, and here employment was a contributing factor. The majority of jurisdictions are in line with this case; the minority hold that in order to be compensable, injuries must arise solely out of the employment and not be caused by seizure.<sup>10</sup>

*Puszharewicz v. Prudential Insurance Co.*<sup>11</sup> involved an insurance policy which provided for double indemnity in case of accidental death. Both medical witnesses testified that deceased had been stricken with an epileptic seizure while in the bathtub. One physician believed that the cause of death was the blocking of the lungs by hemorrhages caused by an epileptic attack which precluded their functioning, while the other was "more inclined to believe that this fellow died of asphyxiation or suffocation because of his nose and mouth, as the result of the convulsion, being under water."<sup>12</sup> The latter accounted for the massive hemorrhages by the insured's convulsive attempts to breathe with his head under water while unconscious from the epileptic attack. The court held that the testimony of the latter was insufficient to support a recovery for death by accidental means.

Under a disability policy it is for the jury to decide whether frequent seizures result in total disability, and lay opinion of plaintiff's past behavior is relevant as well as medical opinion.<sup>13</sup>

In *McPartland v. State*,<sup>14</sup> an epileptic, while hospitalized because of his condition, lost consciousness, fell into a

small shallow tub used for watering cattle and drowned. No recovery was granted: this was not an event which would reasonably have been anticipated by prudent hospital management, especially since deceased's mental condition at the time of the accident was good and he was under consideration for convalescent discharge.

In *Lipps v. Milwaukee Electric Ry. & Light Co.*,<sup>15</sup> damages were refused to a child whose epileptic seizures were alleged to have been a result of prenatal injuries before foetus could have been born viable.

**Traumatic Epilepsy** Traumatic epilepsy is believed to be caused by formation of scar tissue following laceration of the meninges and brain. As the scar tissue grows older it contracts with the result that traction may be exerted on the brain, creating a focus of irritation. Automobile accidents and Workmen's Compensation cases account for much of the law on the subject.

Once it has been determined that epilepsy exists, and that the fit or convulsion is not caused by post-operative shock, for example, it is necessary to establish to the court's satisfaction that epilepsy was caused by trauma.

In *Kennedy v. Holmes Const. Co.*,<sup>16</sup> a neurosurgeon was guarded in his opinion that claimant's convulsions were caused by a blow on the head: "all I can say is that it is the most likely cause",<sup>17</sup> while claimant's personal physician testified definitively that his condition was due to a blow on the head. The court said:

"Medical testimony is essential here; a causal connection between the original injury and claimant's present disability must be shown by positive expert opinion evidence of such

quality and quantity as to amount to more than a probability, conjecture, or guess. . . . The medical expert must testify, in effect, that in his professional opinion the result in question came from the cause alleged."<sup>18</sup>

The court held that while the opinion of the expert alone might not be sufficient to support an award of damage, the opinion of both physicians was ample.

In *Cole v. Miami*,<sup>19</sup> a case in Workmen's Compensation, claimant had three convulsive seizures. He sought to establish to the satisfaction of the Workmen's Compensation Board that he had traumatic epilepsy due to an accident which occurred at his place of employment. Physicians testified that his convulsions were a result of three possibilities: scar tissue, neuro-syphilis or brain tumor and that positive diagnosis could not be made without encephalogram tests. Claimant refused to undergo examination by encephalogram because of the danger attached which was minimized by a specialist, and award was refused.

A 3 year 10 month old child sustained severe head injuries including probable permanent damage to the base of the brain when struck by a truck. His physician testified to the possibility that scar tissue would form over the injured part of his brain and cause traumatic epilepsy. Plaintiff was awarded damages in the amount of \$8,908.60.<sup>20</sup>

An award of \$54,000 was upheld when a boy of 13 was injured in an automobile accident. The court said:

"Considering the nature and extent of plaintiff's injuries and disabilities [fracture through base of skull, contusion to brain stem, hemorrhage

from the ear and profuse bleeding], pain and suffering, *the possibility of developing epileptic seizures*, his age and life expectancy, the present purchasing power of the dollar, we cannot say as a matter of law that [the amount of the award] is excessive."<sup>21</sup>

In this case three doctors testified only to the possibility of the development of traumatic epilepsy. They declared that they could not say definitely whether it would or would not develop.

In cases similar to those cited above where epilepsy has not resulted by the time of trial (usually one to two years after the accident has occurred), it is difficult for the court to determine the amount of damages. Medical testimony is often conflicting. In borderline cases where epilepsy may or may not develop in the future, physicians seldom can be pinned down to a yes or no answer by virtue of the nature of the case. Here the court may have to rely on past histories of similar cases. So a physician may testify that plaintiff has a severe depressed fracture of the skull involving laceration of the underlying meninges and brain, and that 20 to 45% of known cases developed traumatic epilepsy after such an injury. The courts are usually liberal in finding that epilepsy will develop since plaintiff has only one chance in court.

Libelant suffered head injury when struck by a winch while working as a deck hand. Recovery of \$85,000 plus free medical treatment and hospitalization as needed was awarded. His injuries—disfiguring depressed scar on side of head, epileptic seizures, severe aphasia, depressed moods and extreme nervousness resulted in total disability.<sup>22</sup>

Plaintiff, an unemployed cook who

was already psychoneurotic, only received \$45,000 from a head injury with brain damage resulting in traumatic epilepsy, post-traumatic psychosis and other minor neurological symptoms. He did not sustain a general loss of earning capacity which a person would ordinarily be compensated for under normal conditions.<sup>23</sup>

Determination of damages is made on the basis of the severity and frequency of attacks, the efficacy of anti-convulsant drugs in the particular case, and whether or not plaintiff can work at his former job or be rehabilitated in a new job. The prejudice of employers in hiring epileptics is also taken into account. Testimony of the physician is the determining factor in each case.

The following case is illustrative of the evidence the physician supplies to the court. Plaintiff was awarded \$72,867.28 in a 1954 New York case.<sup>24</sup> He was hit on the head by a falling rock



when he visited a state park and suffered severe injuries including traumatic epilepsy. Plaintiff relied on two expert witnesses, both neurosurgeons. One of the neurosurgeons testified that plaintiff had

"traumatic epilepsy which is the result of scarring of brain . . . resulting in periods of blackouts in which he feels unsteady for several seconds at a time.

"Now when he gets them [episodes of dizziness] he gets two or three in a day, and this definitely results from the scarring of the brain and the intermittent impairment of consciousness."<sup>25</sup>

The traumatic epilepsy was attributable to the accident.

The second testified in substance that the epilepsy was a permanent condition. He stated further that nothing could be done operatively to cure him. Plaintiff gets relief from drugs which help his motor control, but not his mental condition. His employability is injured by his condition. "I want to state for the record that if I was plant physician he would not be on the job."<sup>26</sup> He was a first-class tool-maker and machinist. Now he lacks the capacity to think or do more than a repetitive job. Moreover, since his period of loss of consciousness, his work with moving machinery has become hazardous. Plaintiff has become a very dull man and prematurely senile. His traumatic epilepsy is incurable and will get worse. His life span has been shortened by a decade.

"It is interesting to note that even in mild forms of epilepsy, you never see any epileptics after the age of 60 because they are all dead, and they die of inner effects that are about 100% associated with their epileptic condition."<sup>27</sup>

### **The Epileptic and Criminal Law**

Magnus was convicted on a charge of disorderly conduct. On appeal the con-

viction was reversed because undisputed medical testimony showed that the act was committed during an epileptic seizure.<sup>28</sup>

In order for an epileptic to be excused from criminal responsibility he must have been under the influence of a seizure during the act, and the act must have been a result of the seizure. Proof of epilepsy in a criminal case is based on past history, description of behavior during crime, and results of an electroencephalogram.

Despite their limitations electroencephalograms sometimes offer some objective evidence of permanent brain injury. Gibbs<sup>29</sup> indicates that EEG's have given "good and useful correlations" in (1) organic injury to the nerve cells of the brain; (2) traumatic and non-traumatic epilepsy; (3) age; and (4) states of consciousness and unconsciousness. A normal encephalogram may result even though epilepsy or organic brain damage exists. Thus pathology may exist deep in the brain and yet not show up in the tracings.

In England a few years ago, the EEG was used to prove epilepsy in a murder case. Prolonged clinical observation of defendant in the prison infirmary produced no corroborative evidence. The circumstances of the case and the observations of two medical witnesses suggested that the prisoner was an epileptic. Conclusive proof was obtained by an EEG and defendant was judged guilty but insane.<sup>30</sup>

In *State v. Clark*,<sup>31</sup> defendant suffered epileptic seizures during the trial. The trial was suspended during convulsions and not resumed until the judge was assured the defendant was well enough to proceed.

It was held that the evidence did not

support a contention that defendant was not medically present at all times during the trial.

**The Epileptic and Eugenic Laws**  
*Vendetto v. Vendetto*,<sup>32</sup> the husband was granted a divorce on the grounds of fraudulent concealment of epilepsy by the wife at the time of the marriage.

In a New Jersey case, a marriage was annulled because of a similar fraudulent concealment despite the fact that the marriage was consummated.<sup>33</sup>

In seventeen states it is a crime or a misdemeanor for an epileptic to marry. While in most jurisdictions the marriage

is voidable only, in Connecticut and Wisconsin the marriage is null and void and the children are illegitimate. In those states without statutes, fraudulent concealment of the disease is grounds for annulment.

Nineteen states have laws permitting sterilization of epileptics.

These eugenic laws were enacted at a time when it was believed that epilepsy was primarily a hereditary disease, and before alleviative drugs were discovered. Most of these laws are outmoded and have not kept pace with medical discovery in the field.

### Summary

1. Epilepsy consists of repeated episodes of disturbances of consciousness and almost invariably some motor or psychic abnormality of behavior associated with amnesia.

The major types of epileptic seizures are grand mal, petit mal, psychomotor seizure and traumatic epilepsy.

2. The most common legal situation to which the epileptic is party is a negligence suit arising from an automobile accident. Most states regulate issuance of drivers' licenses to epileptics, some prohibiting epileptics from driving, others supervising issuance of licenses to a lesser degree. It is negligent for an epileptic to drive with knowledge of a history of suffered periods of unconsciousness; it is mandatory for an employer to inquire into an employee's physical and mental fitness before hiring him as a chauffeur.

3. In the majority of jurisdictions, an injury is compensable in Workmen's Compensation even if

epilepsy was a factor contributing to the accident. Only a minority of jurisdictions hold that injuries must arise solely out of the employment to be compensable.

4. In cases involving traumatic epilepsy, physician's testimony is essential to the court in determining whether epilepsy exists, or will occur in the future, whether its cause was trauma, and the extent of the disability. EEGs are some aid to diagnosis.

5. Damages are determined on the basis of extent of disability, efficacy of drugs, and possibility of vocational rehabilitation.

6. An epileptic is excused from criminal responsibility if under the influence of a seizure during an act and if the act was a result of the seizure.

7. In each case, the court relies heavily on medical testimony.

8. Many states have outmoded eugenic laws. These laws have not kept pace with medical knowledge of the nature of epilepsy and discovery of alleviative drugs.

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133 East 58th Street

## Clini-Clipping



Incision site in operation for benign enlargement in male due to gynecomastia.

# Clinico-Pathological Conference

## Philadelphia General Hospital

**History** This 49-year-old white male was admitted to the medical service on 1/19/54 with a chief complaint of "smothering if he walks up steps," complaint of six weeks duration.

**Prior to Admission** On 7/4/52 while doing house chores the patient suddenly felt as if he had heat exhaustion with weakness and dizziness. This episode was of short duration and he recovered spontaneously. Subsequently, however, he began losing weight and lost 60 pounds inside of six weeks. There were no other symptoms. At the end of six weeks, for reasons unknown, he stopped losing weight and maintained his weight of 175 pounds until just prior to present admission when he began to have shortness of breath when walking. One week later (five weeks prior to admission) he began to note that his voice was becoming hoarse and that he could not swallow properly. The feeling of weakness again returned. About four weeks prior to admission he noted that he had difficulty breathing while lying on his back, and he developed a slight

pain in the back. Past medical history included (1) Diphtheria as a child. (2) No operations. (3) No accident. (4) No history of venereal infection. (5) No allergies. Review of systems negative except for what was stated above. Patient worked as a card-cutter making patterns for looms; admitted to no alcoholic excess, no history of amount of tobacco used.

**Physical Examination** Well developed, but poorly nourished white male, in no apparent distress, but appearing chronically ill. Patient speaks in a hoarse voice. T 98, P 88, R 24, BP 100/60. *Head*—not remarkable. *Eyes*—conjunctivae and sclerae clear. EOM normal. Pupils regular, equal, and react to light and accommodation. Fundi not remarkable. *Ears*—not remarkable. *Nose*—not remarkable. *Throat*—tongue dry; left tonsil prominent and dark. *Neck* (1) no adenopathy. (2) thyroid not palpable. (3) no rigidity. (4) trachea deviated markedly to the right. (5) no neck vein distention. *Chest*—chest markedly emphysematous. Slight

lag on left. *Lungs*—percussion note is dull over the entire left chest with dullness extending across to the right edge of the sternum. Breath sounds diminished over the left chest superior to the nipple, and tubular in quality. Breath sounds absent on the left below the nipple, and below T5 posteriorly. Breath sounds present and distinct on the right; occasional wheezes heard here. *Heart*—unable to determine heart size. No PMI felt. Cardiac sounds generally diminished, the first heart sound not well heard. NSR, no murmur. *Abdomen*—liver palpable down to the umbilicus with the edge slightly tender. Spleen palpable 2FB below the left costal margin. *Genitalia*—normal male. *Rectal*—postrate 2 x enlarged; no intrinsic masses. *Neuro*—not remarkable.

**Course** On 1/23/54 a thoracentesis was attempted, going through the 7th I.C.S. in the A.A.L. No fluid, however, was obtained. On 1/25/54 bronchoscopy was performed. This revealed paralysis of the left vocal cord with complete occlusion of the left main branches. A suspicious piece of tissue was present above the occlusion. The patient was given oxygen, aminophylline suppositories, and a high protein, high carbohydrate diet. Patient's dyspnea increased and he expired on 1/27/54 at 6:45 a.m.

#### Laboratory Studies

Hemoglobin	11.6 gms.
WBC	14,900
N	72-bands 5-seg. 67
L	20
M	8
Urinalysis	
reaction	acid
sp. gr.	1.025
Prot.	slight trace
sugar	0

WBC	3-6
RBC	0
Casts	0
BUN	26 mg%
BS	137 mg%
STS	non-reactive
Total protein	7.6 gms.%
Albumin	5.1 "
Globulin	2.5 "
Prothrombin	61% "
Smear for AFB	negative

#### Discussion

**SPEAKER:** Peter A. Theodos, M.D.  
**CONSULTANT:** David Seligson, M.D.  
**CONDUCTED BY:** Herman W. Ostrum, M.D.

*Dr. Theodos:* We are dealing here with a middle aged man who was acutely ill for only eight days. However, in going over the history, it seems that there has been a chronic illness present because there were symptoms 1½ years prior to this admission. Just what the weakness and dizziness represent is difficult to say. One is struck by the weight loss of some 60 pounds which occurred just over a period of six weeks. Why did this weight loss stop and the patient do well for the next 1½ years? He was admitted with the chief complaint of shortness of breath. There appears to be definite emphysema present which perhaps would account for the shortness of breath. However, this in itself should not be enough to cause the death of the patient so rapidly. There are other symptoms present which are more significant, particularly the hoarseness, difficulty in swallowing, weakness, and pain in the back—presumably, this is either in the thoracic or lumbar area.

Although the dyspnea can be explained on the basis of emphysema, the chronic hoarseness suggests that something else is present. Paralysis of the

left vocal cord certainly has to be reckoned with. On bronchoscopy there is evidence of occlusion of the left main stem bronchus. In evaluating the causes of hoarseness, we can exclude local cause since bronchoscopy did not show any tumor, foreign body, tuberculous ulceration, or polyp on the vocal cords. Therefore, one must assume that the paralysis of the cord is related to some pressure on the recurrent laryngeal nerve, probably in the mediastinal region. One must consider the conditions in the mediastinum that will produce pressure on the recurrent laryngeal. Since the recurrent laryngeal is in relation to the arch of the aorta and the aorta is in the middle mediastinum, it would seem logical to assume that whatever is compressing it would be something causing disease in this area. The middle mediastinum contains the heart and great blood vessels, but it is also the site of many lymph nodes, particularly the tracheobronchial nodes.

**Aneurysm** Before going on to discuss the probable condition in the mediastinum, one has to consider other things such as aneurysm of the aorta. We have evidence that the trachea is deviated to the right. Aneurysm of the aorta, particularly the ascending aorta, can cause this type of pressure. However, one would expect other signs of aneurysm. There is no evidence of syphilis in this patient either in the history, the blood serology or in the physical findings. Certainly, syphilis would have to be present if one is to consider an aneurysm although hypertension or arteriosclerosis may be considered as a cause of aneurysm, even though not commonly seen. It is questionable whether these two conditions can produce an aneurysm in the absence of

syphilis. Aneurysms can produce a lot of the changes that are reported in this protocol if they obtain a size where they compress various organs. The hoarseness could be from this, compression of the trachea could produce obstruction, pressure on the esophagus could explain the reason for the dysphagia, and so on depending on how large the aneurysm is and its location. However, I would think that the evidence is against aneurysm.

**Mediastinum** We then come to involvement of the mediastinum. When one considers the mediastinum one can limit the discussion to the middle mediastinum as it doesn't seem that involvement of the anterior or posterior mediastinum by relatively benign conditions could account for the rapid course of events in this patient. One thinks in terms of three large groups: infection, cystic changes, and malignancy.

**Infection** It is conceivable that an infection in the mediastinum, either an acute mediastinitis or a chronic mediastinitis could do this. One thing that puzzles me here is the description of the tonsil on the right side which is reported as enlarged and blackened. Does this indicate that this tonsil is the site of some sort of infection, or is it the site of a malignant change? In either case, extension into the mediastinum can occur particularly through the retrovisceral space to produce enlargement, thickening or infection. However, the course does not suggest that we are dealing with an infectious process. The picture of an infectious process in the mediastinum, I think would be a little different from what we have here although there is evidence in the white count that some increase in the white cells is present. Tuberculosis of the mediastinal

area can account for the enlargement and compression picture. Whether the tuberculosis would be primary or secondary to the disease in the lung is questionable. Other infections can involve the mediastinum, but I doubt if this is an infectious process.

Cystic changes involving either the thymus, esophagus or bronchus probably would not cause enough damage to produce the terminal event here. We can pretty well discount the influence of cysts.

**Lymphoma** This brings us to the question of neoplasms in this area. Involvement of the mediastinum can be of two forms: 1) primary involvement of the glands or, 2) metastatic involvement from the adjacent lung or other parts of the body. Primary enlargement of lymph nodes can be seen. The lymph nodes drain the lung and pleura so that any infection in the parenchyma or other parts of the chest will cause enlargement of the hilar lymph nodes. This type of involvement is probably not the case here because of the changes that occurred subsequently. Involvement of the mediastinal lymph nodes by two major conditions has to be considered. The first is that of the lymphoma group, including Hodgkins disease, lymphosarcoma, and conceivably, lymphatic leukemia. Hodgkins disease is a systemic disease in which there is involvement of many organs, the pulmonary manifestations being just part of the systemic involvement. It is a chronic illness with cachexia and decrease in vitality of the patient over a period of time; one might think that in spite of the absence of generalized lymphadenopathy in this case that some form of lymphoma should be considered. Certainly, if the lymphoma gets large enough and produces

compression we can have the picture as seen here. Something is apparently obstructing the left main bronchus. Is this primarily in the bronchus, is there an extension from the mediastinal region into the bronchus such as from an enlarged lymph node rupturing into the bronchus, or is there an external mass? Are the changes that produce the atelectasis in the left lung, (I assume it is atelectasis rather than fluid) due to retrograde invasion of the lung tissue as can occur in Hodgkins or is this all just compression? Bronchogenic carcinoma would seem to be a very likely possibility here if one assumes that the mass seen in the left main bronchus is a tumor, bronchogenic in origin. This could produce atelectasis of the lung with the changes also aggravated by extension of the carcinoma into the lymph nodes lining the mediastinum. These can attain a large size and could cause the compression picture as seen here. Are the physical signs typical of atelectasis or fluid? The fact that fluid was considered is evidenced by the tap and if fluid were present one would expect to see fluid gotten on the thoracentesis. Perhaps the needle was introduced too low. It was introduced in the seventh anterior interspace in the anterior axillary line. This is at the level where the pleural reflection is and conceivably in a normal patient one would expect to get fluid if it were present. But if we have atelectasis with elevation of the diaphragm, it may be that the needle was introduced much too low, particularly if the patient were sitting down as this tends to cause the abdominal contents to push up on and elevate the diaphragm. I am not certain that we have or do not have fluid. The physical signs suggest atelectasis rather than fluid.

Are we therefore dealing with a bronchogenic carcinoma which has extended into the mediastinum and enlarged to cause atelectasis by obstruction of the main stem bronchus or are we dealing with a lymphoma? If the latter, in a man of this age, it would be a lymphosarcoma rather than the Hodgkins which is generally seen in younger people. The absence of peripheral adenopathy would make the lymphoma group less likely.

What caused the death of the patient? If this patient has true emphysema, did he go into terminal heart failure with failure of the right side producing an enlarged liver? This would not explain the enlarged spleen. There is no history of edema of the ankles or of venous distention to account for a circulatory death on this basis. What actually caused the death of the patient is hard to say. Presumably, there is respiratory insufficiency. In a patient who has emphysema, whose left lung is entirely knocked out, and there is compression and stenosis perhaps of the trachea—this in itself is enough to cause respiratory insufficiency, probably with some circulatory collapse. In summary, I would think that the evidence points first to a carcinoma, either primary in the lung or secondary to some organ elsewhere, and secondly, to one of the lymphoma groups, probably lymphosarcoma, with the terminal episode probably being related to the emphysema and circulatory and respiratory insufficiency.

*Dr. Seligson:* We have some abnormality in the laboratory tests; it would be nice to integrate them into a pattern that would be meaningful. We have anemia, leukocytosis with some shift to the left, some proteinuria, an elevation

of the BUN, and an elevated fasting blood sugar. These would be difficult to interpret on the basis of each individual organ. I think that what this really tells us is that we have a wasting neoplastic disease. I will tell you why I came to this conclusion. We have no evidence that this man is diabetic and no reason why he should have an elevated glucose of 136 mgm.% We see this once in a while in a patient who is wasting rapidly. Now, this in a sense is a wasting of protein tissues and conversion of these tissues ultimately to glucose. I don't think that we have any reason to consider diabetes. We might consider this as a reflection of the degree and rate of wasting that this man has. The elevation of BUN also goes along with this concept. If he is wasting tissue protein rapidly, even with a normal kidney, he might have a little more than normal amount of BUN. The slight amount of proteinuria perhaps suggests the same phenomena. This may, however, be a reflection of some damage to the kidney. The anemia would go with a disease process in which there is wasting and the leukocytosis may reflect this kind of wasting. All I can say about this chemistry is that it points to what has been discussed by Dr. Theodos.

*Dr. Ostrum:* On the examination made in January 1954, the heart and trachea are displaced to the right. There is a density covering the entire left lung. The diaphragm is not depressed much, but more straightened in the mid portion. The opposite lung is emphysematous. We have a very interesting finding on the right side that may help us a lot. In the upper portion of the lung, there is a circumscribed density about 3 or 4 cm. in diameter. It is not the aorta; it is a mass. Now, is this

fluid? Fluid could give us this picture. Is this a huge mass displacing the heart? Is this a picture of tumor mass, fluid, an atelectasis?

This film was taken about one week later showing displacement of the trachea, esophagus and again the diaphragm is not depressed much.

So, we have here two examinations of the chest indicating a heart that is very much displaced to the opposite side by a space taking mass in this region.

**Malignancy** Now, I would lean more toward malignancy from this standpoint. This density to me is very important. It indicates a tumor mass. Any tumor mass could cause compression of the bronchus with atelectasis. Aneurysm can do it as well as other tumors. But with the mass in the right lung, I would consider this primarily a large tumor mass occupying the left chest with fluid and the tumor mass being large enough to displace the heart and mediastinal structures to the opposite side.

*Dr. Aronson: CHIEF DISEASE: Oat Cell Carcinoma.*

At autopsy, the left lung weighed 3270 gms. The pulmonary parenchyma was compressed to a 1 cm. plaque again at the thoracic wall, and the rest of the lung was completely replaced by this hard tumor mass which was an oat cell carcinoma with large areas of necrosis in it. The right lung was normal grossly, and microscopically showed only some slight congestion. The heart shows left ventricular hypertrophy. There were tumor nodule infiltrations of the myocardium and the left ventricle. There was also a carcinomatous permeation of the pericardial lymphatics. There were enlarged mediastinal and mesenteric nodes which showed the microscopic picture of Oat Cell Carcinoma. There were nodules of carcinoma in the liver and spleen. The spleen weighed 700 gms. There were also Oat Cell carcinoma in the adrenals. The other organs showed congestion.



### "MEDICAL TEASERS"

A challenging crossword puzzle  
for the physician  
page 43a

## Bursitis of The Lower Extremity

Bursae are potential spaces which develop in connective tissue in response to functional demands. In a large series of newborn cadavers dissected (by Black), only the subacromial bursae were present, and these in only 72.5% of cases. The other bursae, both superficial and deep, develop after birth. Bursae contain a small amount of synovial-like fluid—just enough to permit movement of their opposing walls against each other without friction. Superficial bursae develop between the skin and bony prominences, to permit free movement of the skin over the bone. Deep bursae develop between muscles and moving bony points.

### 1. Diseases of the Superficial Bursae

**A. Acute Traumatic Bursitis** Mild trauma to a bursa produces no pathological change. However, severe external violence to a superficial bursa results in a tear or contusion of the bursa, with hemorrhage and exudation. The bursa fills with serosanguineous fluid, and becomes a well-defined fluctuant sac. The fluid is absorbed when the acute reaction subsides, but some fibrin usually remains and organizes, producing thickening and roughening of the bursa wall, and adhesions between its surfaces. Symptoms are tenderness, distention, and a history of trauma.

Treatment consists of immobilization with a plaster or metal splint or by bed rest; elastic bandage to prevent further swelling; cold compresses for 24-36 hours, then heat; aspiration of the fluid under local anesthesia, using a #18 gauge needle, and sedation and analgesia as required. Hydrocortisone acetate injected locally in the dose of 25 mgm. has been reported to be effective in some cases. Recurrence following repeated trauma, and progression to chronic bursitis are common complications.

### B. Subacute and Chronic Bursitis

Mild recurrent trauma, or incomplete subsidence of acute bursitis, results in fibrosis of the bursa wall. The wall thickens and trabeculae and villi fill the space. The amount of fluid is increased. Calcification of the bursa wall is not uncommon in long-standing chronic bursitis. Acute exacerbations of chronic bursitis often result from even mild trauma. Symptoms are 1) sharp pain in the area of the bursa following mild trauma, 2) thickening of the bursa wall, resulting in a rubbery consistency, 3) small, hard, tender, slightly movable villi within the bursa, and 4) a previous history of acute bursitis.

Differential diagnosis should include tuberculous bursitis, lues (gumma), suppurative bursitis (pyogenic and

gonorrheal), and arthritis. Treatment consists of 1) aspiration for relief of pain and for diagnostic purposes (The bursa usually refills within 24-48 hours.), 2) injection of sclerosing agents—Sodium morrhuate, e.g. (not recommended), and 3) excision, under local or spinal anesthesia (the treatment of choice in the presence of persistent symptoms).

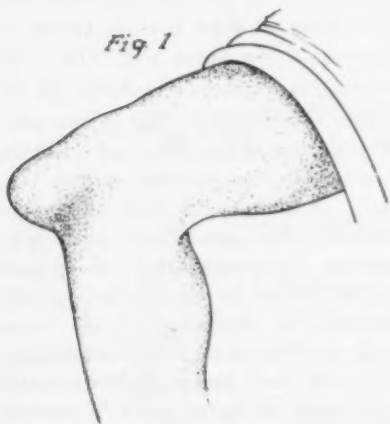
**C. Suppurative Bursitis** results from 1) infection of a laceration or puncture wound of the skin over the bursa, 2) extension of contiguous infection (e.g., furuncle), and 3) blood-borne infection (uncommon). Pain, swelling, fever, and erythema are the symptoms. Lymphangitis often results. Treatment consists of 1) splinting, 2) bed rest, 3) moist heat, 4) incision and drainage (with culture of the material obtained),

and 5) antibiotics. Excision should not be performed during the acute episode, but may be done when the infection subsides.

**Prepatellar Bursitis** The prepatellar bursa lies in the subcutaneous tissue over the patella and patellar ligament, and because of its superficial position it is easily traumatized, especially by persistent kneeling. Acute injury may produce acute bursitis, but chronic bursitis ("Housemaid's Knee") is more commonly seen, and is characterized by local pain, and prominent swelling over the patella due to thickening of its wall and effusion into the bursa (Figure 1). Tender, firm, slightly movable villi are felt after aspiration or subsidence of the effusion (Figure 2). The fluid is bloody if the bursa has been recently traumatized; it is serous or serosanguineous if

Chronic prepatellar bursitis.

Fig 1



Chronically inflamed bursa, cut open after excision. Note thickened wall, and trabeculae and villi inside bursa.

Fig 2

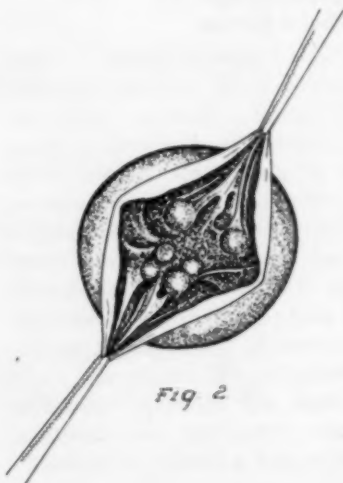




Fig. 3

Bunion. Note hallux valgus deformity; and bursa overlying hypertrophic head of first metatarsal.

the effusion is of longer duration. Repeated exacerbations and remissions of symptoms are the rule.

Differential diagnosis should include gout, lues, and fracture of the patella. X-ray examination is recommended. Excision of the bursa is the treatment of choice for long-standing, symptomatic bursitis. This may be done under local anesthesia, but hospitalization is advisable. Immobilization, aspiration, and local injection of Hydrocortisone are useful measures in the acute episode. In the presence of infection, rest, heat, and antibiotics are used. Incision and drainage may be required.

**Bunion** A bunion is a painful chronic inflammation of a superficial bursa over the medial side of the head of the first metatarsal (usually over a hallux valgus deformity). There is swelling over the

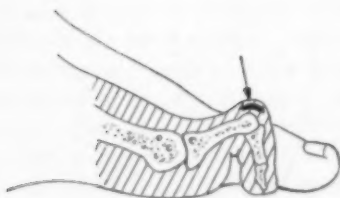


Fig. 4

Hammer toe. Note subcutaneous bursa overlying prominent head of proximal phalanx.

area and marked tenderness (Figure 3). Infection and sinus formation are occasionally seen. The only satisfactory treatment is excision of the bursa and the bony prominence of the head of the first metatarsal with section of the attachment of the adductor hallucis tendon. This may be done in ambulatory patients, but spinal or general anesthesia is preferable, and this necessitates hospitalization.

**Achilles Tendon Bursitis** A chronic bursitis occasionally develops over the Achilles tendon, from irritation by a tight shoe. Removal of the cause is usually sufficient, but the bursa may require excision.

**Hammertoe** A chronically inflamed bursa develops over the proximal interphalangeal joint of a hammertoe (Figure 4). The treatment is correction of the hammertoe deformity.

**11. Diseases of Deep Bursae** Acute traumatic bursitis of the deep bursae of the lower extremity is common, and may be due to direct or indirect trauma. Symptoms are pain on movement of the nearby joint, weakness of the extremity due to pain, and tenderness and swelling over the bursa. Oft-repeated trauma

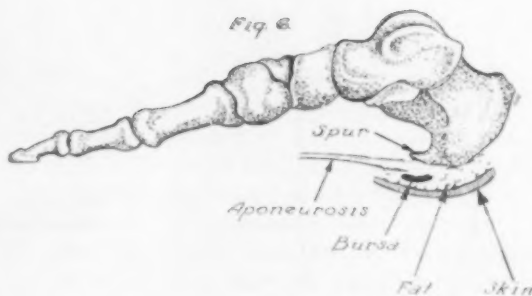


Fig. 5

Chronic bursitis of semimembranosus bursa (Baker's cyst).

or incomplete subsidence of acute bursitis often result in chronic bursitis. Symptoms are similar to those of acute bursitis, but are of longer duration. Calcification of the bursa wall is common. Chronic non-traumatic bursitis results from degenerative changes in the bursa wall.

Treatment of the acute episode consists of rest, local heat, sedatives, and aspiration. Incision and drainage may be necessary. Procaine injected locally often results in temporary relief of symptoms. Rest, diathermy, and local injection of 25-50 mgm. of Hydro cortisone are helpful in chronic bursitis, but excision of the bursa is the treatment of choice in the presence of



Medial view of bones of foot, showing calcaneal spur and overlying bursa.

long-standing symptoms. Hospitalization is required for excision.

The bursae which are most commonly symptomatic are:

a. *Supra-Trochanteric Bursa* (in the muscle planes above the greater trochanter of the femur. The onset may be spontaneous or may follow acute trauma. Symptoms are pain down the antero-lateral aspect of the thigh, which is increased by activity. There is a slight limp and local swelling and tenderness. Tuberculosis is a common causative agent in bursitis around the hip joint.

b. *Subgluteal Bursa* (between the greater trochanter and the gluteus maximus muscle);

c. *Iliopsoas Bursa* (between the capsule of the hip joint and the iliopsoas muscle);

d. *Ischiogluteal Bursa* (between the tuberosity of the ischium and the gluteus maximus);

e. *Pretibial Bursa* (between the quad-

riceps tendon and the tibial tubercle);

f. *Semimembranosus Bursa* (between the medial head of the gastrocnemius muscle and the semimembranosus tendon, and the postero-medial aspect of the capsule of the knee joint. It may communicate with the joint). Disease of this bursa is common in children ("Baker's Cyst") (Figure 5). It presents as a tender, tense, ovoid swelling on the medial side of the popliteal space with the knee in full extension, and partially disappears with flexion. The patient limps, holds the knee stiff, and complains of pain in the popliteal space, with radiation up the thigh and down the calf. The only satisfactory treatment is excision, and this should be performed in the hospital.

In patients past middle-age, this bursa occasionally acts as a "blow off valve", becoming distended with synovial fluid when the knee joint contains an effusion due to arthritis, etc. Treatment is that of the primary lesion. Excision of the bursa may result in a synovial fistula.

g. *Heel Bursa*: Painful heel in adults

has been thought to be due to a bony spur over the tuber calcanei. However, the finding of a spur on x-ray is incidental, and of no particular significance per se. Pain on the under surface of the heel with walking is due usually to bursitis in the area of the tuber calcanei (and spur if present), or to painful tension on the plantar aponeurosis or flexor digiti brevis muscle which attach to the tuber calcanei (Figure 6).

Treatment by pads and springs to relieve pressure is usually unsuccessful. Rest and diathermy are occasionally helpful. Drainage of the bursa with a large needle, under local anesthesia, may relieve the pain. Infiltration of the bursa with procaine or Hydrocortisone also may be effective.

If symptoms persist, subcutaneous division of the attachment of the aponeurosis to the calcaneus may be performed under local anesthesia through a medial incision. After a week of rest and elevation of the extremity, the patient can usually walk without pain. Excision of bursa is rarely necessary.

### Clini-Clipping

Milk seeping from engorged breast. So-called "witch's milk," due to presence of maternal hormone transferred via the placenta. (after Anderson)



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# EDITORIALS

## **The Doctor's Relation to the National Economy**

With characteristic diffidence and modesty the medical profession does not trumpet its responsibility for the smooth running of the American economy. The fact is that the allegedly rugged individuals who operate our vast social and industrial machine need much physical attention on the part of their dedicated doctors. Everybody saw what transpired in the recent case of the President of the United States; his ailments and his medical attendants and his treatment were thoroughly publicized. Multiply his case by a million or so and some idea of the nature and volume of such problems may be realized. For it is a fact that it is the doctor who keeps the social and industrial machine functioning properly. It is he who combats and often cures the peptic ulcer or ileitis of the executive, editor, engineer, or captain of industry, making possible the appearance of the morning paper and the performance of gears and dynamos.

The doctor plays an unspectacular but vital part in the successful operation of our great economy.

At the recent personnel conference of the American Management Association a medical report was made on the re-

sults of examinations of 500 business executives which revealed that more than half had some disease. One of every ten had some form of heart disease. The role of the doctor in this situation is obviously an all-important one.

## **The Proper Place of Medicine in The Social Perspective**

David Sarnoff, President of the Radio Corporation of America, recently remarked in an address before the American Academy of Political and Social Science that "because the social changes brought about by the automobile, motion pictures and the telephone are leveling in their effect, they are generally regarded as democratic. But the leveling is done by the mass generators of energy, the mass producers of goods, the mass carriers who direct our railways and steamship lines, the mass entertainers who have brought radio and the motion picture to their present state. There is nothing democratic in the philosophy of the class that dominates technological advance. A few bold corporation heads have bluntly said as much." Leveling in this case really means monopolistic control. The nationalization of medicine would consummate and complete control.

## Blame the Gods

According to authoritative estimates, there are 4,500,000 alcoholics in the United States, the ratio of men to women being six to one. When one considers the astronomical profits that accrue to the alcohol industry in all its ramifications it is inconceivable that results in terms of accidents and crime are susceptible of much modification. Alcoholism is also indissolubly associated with every aspect of our culture. And it is the narcotic par excellence which enables men to tolerate the stresses and strains of a dubious civilization.

It would seem that the gods have willed it so, perhaps as one of their practical jokes.

## A Creative Enigma

Homosexuality has played a curious part in literary art. This element is glaringly obvious in the Sonnets of Shakespeare, addressed either to the Earl of Pembroke or the Earl of Southampton:

O, know, sweet love, I always write of you,  
And you and love are still my argument;  
So all my best is dressing old words new,  
Spending again what is already spent:  
For as the sun is daily new and old,  
So is my love still telling what is told.

[Sonnet 76]

The *Religio Medici* of Sir Thomas Browne is another famous example.

In America we find Walt Whitman passionately inspired by his homosexual nature, and most strikingly of all, the New England poet, Emily Dickinson, "brightest star in the firmament of American lyric poets" (Percy Hutchison)—"the greatest woman poet of all time" (Louis Untermeyer).

Rebecca Patterson in her *Riddle of*

*Emily Dickinson* (Houghton Mifflin, Boston 1951) has published an engrossing study of this writer of Shakespearean stature whose greatest love poetry is frankly addressed to a woman whose identity is completely revealed in the Patterson book.

## Pre-eminent American Egghead

Benjamin Franklin is one of the great laymen who seem naturally to belong in the medical domain; he is an ex officio member of the profession. For he invented bifocal lenses and a flexible catheter, treated paralysis with static electricity (1757), recorded observations on gout, the blood, sleep, deafness, nyctalopia, the infective nature of colds, cadaveric infection, infantile death rates, and medical education. He founded the Pennsylvania Hospital. In 1759 he published in London his views on inoculation in smallpox.

Surely the protagonist of American intellectualism. Medicine should hold him in special esteem. His like among laymen is not known today, nor perhaps ever will be again.

## Averting Fetal Disaster

Erythroblastosis fetalis seems a less formidable problem in the light of some apparent success in averting fatal disaster by the use of vitamin P compounds. Thus in *Surgery, Gynecology and Obstetrics* of August, 1956, Warren W. Jacobs of Houston, Texas, reports excellent results with a bioflavonoid preparation of such a type.

It is a pleasure to take note of such progressive steps in the battle against pathogenic factors as formidable as those responsible for erythroblastosis fetalis.

# The Pharmaceutical Industry

PERRIN H. LONG, M.D.\*  
Brooklyn, New York

Not much thought is given by doctors today about their relations with the pharmaceutical industry. For most practicing physicians, the major and often only real contact with the companies in the industry is through detail men or company exhibitors at medical meetings. Their reactions to the individual company are frequently governed by the personality of its medical service representatives. The doctor translates the personality of these individuals into that of the company. That's fine as far as it goes. However, residents and interns, as well as practicing physicians, should become more familiar with the American pharmaceutical industry; this industry could not exist without help from the doctors. Doctors would be hard put to practice modern medicine were it not for the industry.

We must all realize that pharmaceutical companies exist only because someone has invested his money in an enterprise which he hopes will return him a reasonable profit on his investment. Hence, as physicians, let us be intelligent enough to realize that if a pharmaceutical company does not profit by its activities, it will eventually become

bankrupt and have to close shop. So let's not complain about the industry making money. Let us also realize that research and development of new products is a costly matter today.

I have said that doctors need the industry and the industry needs doctors. Let's look at some examples of cooperation between doctors and the industry. During the past thirty-five years we have witnessed a continuing flow of mutual effort between the industry and doctors in the development of therapeutically helpful, even life-saving compounds. Physicians and scientists took their initial findings relative to insulin, liver, certain of the vitamins, estrogens and androgens, the first three antibiotics, certain steroids and corticoids, plasma and the plasma expanders, polio vaccine, typhus vaccine, and other interesting products to the industry for development, refinement, and production. The scientists of the industry, on the other hand, have come to physicians with the

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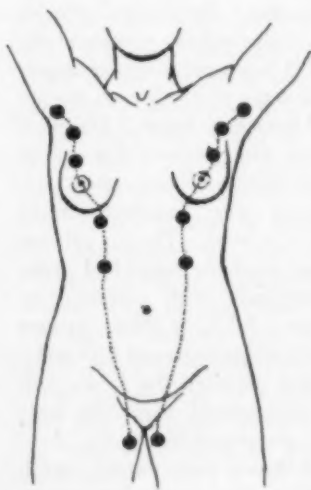
antihistamines, beginning with ephedrine, certain vitamins, certain of the early steroids, many hormones, the major sulfonamides, purified digitalis bodies, many of the antibiotics, antimalarial agents, DDT, the most recent corticoids, the "tranquilizers," antidiuretic agents, and other useful products, asking for their cooperation in the pharmacological testing and clinical development of these products. In addition, the industry as a whole has taken advantage of every new development to bring the finished product to the doctor in a form which makes it easiest for him to use. It seems to me that if the question is raised "Who done it?" the only realistic answer is, "The doctor and the pharmaceutical industry working hand in hand."

Another facet of the industry's activi-

ties, to which too little thought is given, is the sums of money which it gives every year in the form of grants-in-aid to doctors for scientific work. No one knows exactly how much, but a good guess would be that the ten major companies, between them, give more than two million dollars a year, much of it unrestricted, for such purposes. At four percent, that sum represents the income from a fifty-million-dollar endowment. In addition, the industry spends millions of dollars a year for intramural research looking for products which will help our sick patients. So when we think of the industry, I think we should realize that we have a proprietary interest in its activities and together with it, do everything to promote the best interests of American medicine.

### Clini-Clipping

Black circles show locations of supernumerary breasts and nipples. Dotted lines show course of the milk lines of the embryo. (after Merkel)



## MEDICINE

ELIZABETH K. HOYT, M.D.\*

**Metacortandracin (Meticorten) in the Treatment of Disseminated Lupus Erythematosus and Periarteritis Nodosa**

C. L. R. Steinberg and A. I. Roodenburg (*Annals of Internal Medicine*, 44: 316, Feb. 1956) report the treatment of six cases of disseminated lupus erythematosus and three cases of periarteritis nodosa with metacortandracin (Meticorten). One of the patients with periarteritis nodosa died; while the autopsy in this case showed extensive arterial involvement, the diseased arteries showed no inflammatory process, indicating that if treatment had been begun in the early stage of the disease, the results would have been better. The other two patients with periarteritis nodosa have shown marked improvement under treatment with metacortandracin and are able to work. The six patients with lupus erythematosus had been treated previously with cortisone or corticotropin. All have shown greater improvement under treatment with metacortandracin; although the L. E. cells have not disappeared from the bone marrow or peripheral blood, the blood picture has shown improvement, which is especially marked in the first patient treated. All these patients are able to carry on their usual activities with little,

if any, restriction. The initial dose of metacortandracin in these cases varied from 30 mg. to 10 mg. every eight hours except in one case; every five days the initial dose was decreased by 5 mg. until the maintenance dose was determined—usually 15 mg. to 20 mg. daily. In addition to the fact the metacortandracin has greater anti-inflammatory activity than cortisone or hydrocortisone, it also does not cause either sodium retention or potassium depletion, so that patients under treatment with this corticoid tolerate a normal diet without salt restriction or the use of large doses of potassium which often disturb digestion. All but one of these patients have been under treatment and observation for sixty to one-hundred and twenty days, and the results are favorable for this short-term treatment with metacortandracin; a longer period of observation is necessary before a definite conclusion can be reached as to the value of long-term treatment with this new corticoid.

## COMMENT

The experience with these cases confirms the general impression that steroid therapy may result in initial symptomatic response in the diseases discussed. So far there is no explanation for the success of one steroid in controlling symptoms where another has failed.

E.K.H.

\* Clinical Assistant Physician Kings County and Brooklyn Hospitals.

### **A Clinical Evaluation of the use of a Rectal Mercurial Diuretic in Patients with Chronic Congestive Heart Failure.**

Norman Makous and associates (*American Journal of the Medical Sciences*, 231:86, Jan. 1956) report the treatment of twenty-three patients with congestive heart failure, who required one or more injections of a mercurial diuretic each week, with suppositories of mercaptomerin sodium (Thiomerin), using one suppository daily. It was found that this reduced the requirement for parenteral mercurial therapy by more than one half. In nineteen of the twenty-three patients, less than one injection a week was required while the suppositories were used; in fourteen cases, less than one injection a month was necessary; and in nine cases no parenteral mercury was required. Careful proctoscopic examination showed that the mercaptomerin (Thiomerin) suppositories caused no local irritation or toxic effects, such as have been observed with other mercurial suppositories.

#### **COMMENT**

Oral mercurial diuretics cause gastrointestinal symptoms in certain patients, and in them a rectal route of administration is particularly useful as an adjunct to parenteral therapy.

E.K.H.

### **Acute Leukemia in Adults Treated with 6-Mercaptopurine**

D. M. Whitelaw and associates (*Canadian Medical Association Journal*, 74: 423, March 15, 1956) report twenty-nine cases of acute leukemia in adults treated with 6-mercaptopurine; in some cases ACTH or cortisone was also employed. The ages of the patients ranged from sixteen to eighty-four years; in seventeen of these cases symptoms had

been present for less than three months. Nineteen cases were treated with 6-mercaptopurine alone; in the other cases cortisone or ACTH was also used. The 6-mercaptopurine was given at first in a daily dosage of 150 mg., and an attempt was made to find an adequate maintenance dose. There were ten patients who showed no clinical response, and of these seven lived less than two weeks, death occurring "presumably" before the drug would have its maximum effect. About half the patients treated (fifteen) showed a definite clinical response, and in about half of them the response was "complete" and has persisted for three to twelve months. Of the fifteen patients who showed some degree of clinical response with a reduction in the total white blood cell count and in the number of blast cells, seven had no enlargement of the lymph nodes and five had no splenomegaly before treatment was begun. In the eight patients with enlargement of the lymph nodes, the nodes decreased in size in five cases, and disappeared in one other case; in the ten cases with enlargement of the spleen, the spleen was no longer palpable in four cases, and showed a definite decrease in size in two other cases. Those showing the greatest reduction in the size of the spleen had been given cortisone in addition to 6-mercaptopurine. No significant toxic effects of 6-mercaptopurine except reduction in the platelet count was noted. The use of cortisone with 6-mercaptopurine appeared to influence the course of the disease itself, as well as to be of value in controlling hemolytic anemia and hemorrhage resulting from thrombocytopenia.

#### **COMMENT**

Usually there is a lag of three to eight weeks

before 6-mercaptopurine elicits a response. Once begun, therapy should be continued for relapse occurs rapidly (within four weeks) if it is not maintained.

E.K.H.

### **Treatment of Peripheral Vascular Disease with Hydergine**

H. L. Murphy and D. H. Klasson (*New York State Journal of Medicine*, 56:381, Feb. 11, 1956), report the treatment of fifty-eight cases of peripheral vascular disease of various types with Hydergine. In the majority of cases an intramuscular injection of 1 cc. Hydergine was given every other day for three months; in some cases the injections were given daily for two or three weeks, and then three times a week. In some cases treatment was continued for six months instead of three months. Thirty-three of the cases treated were cases of arteriosclerosis obliterans; in twenty of these cases there were symptoms of intermittent claudication or nocturnal cramps; sixteen showed ulcerative lesions involving the feet or ankle, and nine were diabetics. The treatment with Hydergine resulted in definite improvement in twelve of the patients with symptoms of intermittent claudication or nocturnal cramps; the cramps in these cases were completely relieved, and walking distance was definitely increased in intermittent claudication. Eight of the twenty patients showed no improvement and amputation was required in two. In the sixteen cases with ulcerative lesions, ten were improved, and six not improved. In those that responded to treatment, healing of the lesions occurred in one to five months; the majority of these patients were treated outside the hospital; when necessary, an ointment of 2 per cent ascorbic acid in a hydrophilic base

was employed. In the nine diabetics, Hydergine had no harmful effect on the control of the diabetes. One patient with coronary sclerosis and angina pectoris reported that he did not require nitroglycerine for relief of angina during the course of Hydergine treatment. Of five cases of thrombo-angitis obliterans (Buerger's disease) the treatment with Hydergine resulted in improvement—relief of pain and increased walking distance—in four cases. Of three cases of Raynaud's disease treated with Hydergine, only one showed slight improvement, the others no improvement. In four cases of abdominal aortic occlusion of long duration moderate improvement was noted in all under Hydergine therapy, especially in relief of heaviness in the legs, intermittent claudication, and nocturnal cramps; the low back pain present in the more advanced cases was not relieved. Of eleven cases of chronic venous insufficiency, nine showed some improvement. In eight of these cases there were chronic trophic ulcerations, usually in the region of the ankles. While there was a reduction in the local edema and pain and some improvement in the granulation tissue, none of these ulcers healed without other treatment such as elastic support, bed rest and elevation.

Hydergine gave good results in one case of frostbite, involving both hands, but had no effect in a case of popliteal embolism, in which operation was impossible. No undesirable side effects of the Hydergine therapy were observed except for one case of generalized urticaria, easily controlled by antihistamine therapy. On the basis of these results, the authors conclude that Hydergine is "a valuable asset" in the treatment of peripheral vascular

disease, especially in cases where sympathectomy is not practicable nor safe.

#### COMMENT

Hydergine is a combination of three hydrogenated ergot alkaloids (dihydroergocristine, dihydroergocornine, and dihydroergokryptine). Usefulness in peripheral vascular disorders is also noted with oral administration. Action causes a reduction in vascular tone and a peripheral dilating effect.

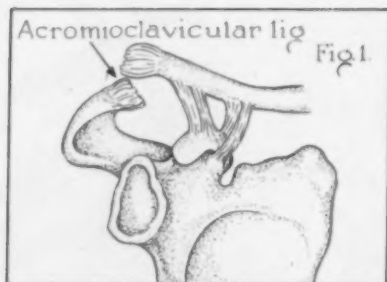
E.K.H.

### A Comparative Study of the Treatment of Essential Hypertension

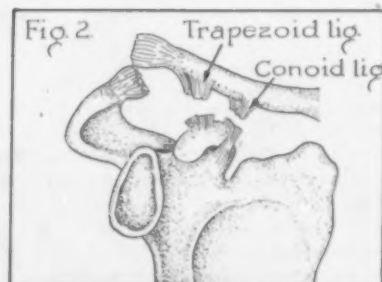
Sydney Stonehill (*A. M. A. Archives of Internal Medicine*, 97:189, Feb. 1956) reports a study of seventeen patients with severe hypertension, which had been present for at least two years. These patients were treated with *Ranwolfia micrantha* alone, with *Ranwolfia micrantha* combined with rutin and mannitol hexantrate, and were also given a placebo tablet; all tablets were of identical appearance and their contents unknown to the patient. All patients were given the same type of treatment for six months, and the change of treatment

was made without their knowledge. The majority of the patients (more than two-thirds) showed a definite reduction in blood pressure under treatment; only those whose hypertension was severe, of long standing and associated with advanced arteriosclerosis failed to respond to the treatment. With *Ranwolfia micrantha* alone, there was a definite fall in blood pressure in most cases, but the hypotensive effect was greater when *Ranwolfia micrantha* was combined with rutin and mannitol hexantrate. In some cases even the placebo had some hypotensive effects, which the author attributes to "the psychosomatic effect of the doctor-patient relationship." There were no serious toxic effects observed with the *Ranwolfia* preparations, and the patients were calm and free from anxiety while under treatment. This indicates that *Ranwolfia* is of value for patients with hypertension even if it does not definitely reduce the blood pressure.

### Clini-Clipping



Partial acromio-clavicular separation (note tear of acromio-clavicular ligament).



Complete acromio-clavicular separation (note tear of acromio-clavicular and coracoclavicular ligaments).

# Philadelphia General Hospital

Philadelphia General Hospital has its origin in the Philadelphia Almshouse which was founded in 1729. This leads the hospital to claim the title of the "nation's first hospital."

PGH is composed of two divisions, the 2029-bed Blockley Division, in West Philadelphia, and the 530-bed Northern Division, in North Philadelphia. Blockley treats medical, surgical, tuberculosis, obstetrical, gynecological, pediatric, psychiatric and neurological patients. Northern furnishes care for contagious diseases, and also for pediatric, obstetrical, gynecological and tuberculous patients.

Most Blockley buildings date from the 1925-1934 period. Those at Northern were built in 1909.

Blockley is the center of much physician activity, and contains on its grounds the Doctors Home.

Examples of Philadelphia General Hospital's \$27 million expansion program appear in this aerial view. The \$7.5 million, nine-story Mills building, which opened in 1951, appears in the foreground. The new \$3.5 million, five-story Food Service building and library, also of cream-colored brick, is to the left of center. In the extreme upper left are buildings of the University of Pennsylvania whose graduate and undergraduate medical schools are closely affiliated with the hospital.



**Ninth in a series on hospital centers**



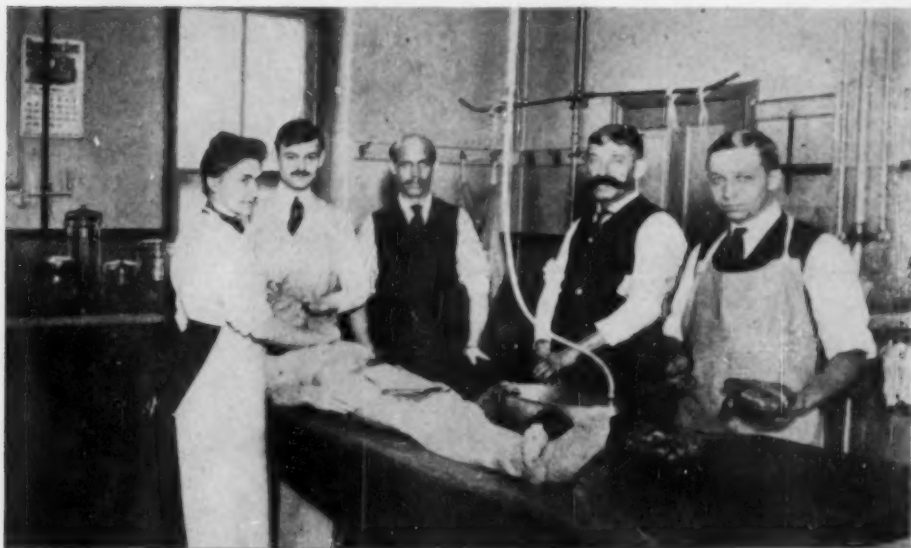


The Osler Memorial building where Sir William Osler lectured as he performed his famous autopsies. To accommodate the large numbers who wished to observe, a large opening was made above the dissection table between the first and second floors.

**Modern Plan** At Blockley, the \$7,500,000, 700-bed Mills Building is a model of modern hospital planning. Newly opened in 1951, it houses both medical and neurological services.

The five-story, \$3,500,000 Food Service Building at Blockley opened in March 1954. It has been cited for an award by *Institutions* magazine, a leading journal in its field for "superlative

Sir William Osler's students of the 1880's and diners in the Dissection Room of the Old Post building, P.G.H. grounds. The building is now preserved as the Osler Memorial building.



The brand new \$1.5 million P.G.H. Maternity building annex is equipped with air conditioned labor, delivery rooms.



achievement in handling, preparing and serving food."

Other recent Blockley improvements include a \$1,500,000 structure comprising a Maternity Wing on its second floor and Central Sterile Supply on the first. Also recent are a renovated outpatient department; and eleven new explosion-proof operating rooms furnished with new equipment.

Currently under construction are a new x-ray department and new laboratories.

At Northern, a four-story 57-bed Maternity Department opened in August 1953. Additional improvements include a new 36-bed tuberculosis wing.

**Osler Memorial** At the rear of the grounds of the Philadelphia General Hospital's Blockley Division stands a squarish, red-brick, two-story structure dating from the Civil War era. This is the Osler Memorial Building.

In it, Sir William Osler "Old Blockley's" most famous son, performed the autopsies and gave the lectures which marked him as one of medicine's "greats." The teaching methods he introduced helped work a revolution in the training of medical men.

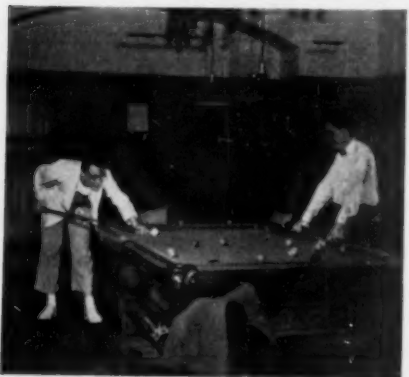
But both before Osler and since his days, the municipally-owned institution has had an international reputation as a major treatment and training center.

The thoroughly modern Charles K. Mills building is named in honor of the prominent Philadelphia neurologist who was a staff member at Philadelphia General Hospital.





The library occupies the entire fifth floor of the Food Service building; contains some 5,000 texts; subscribes to 190 medical periodicals.



Above, two physicians recreate in the billiard room in the Doctors' Home.



One of two spacious, airy cafeterias in the Food Service building.

**Most Promising** Consequently competition traditionally is keen for PGH's 95 residencies and 108 intern posts. During 1955, 344 young medical men applied for residencies, and 635 for internships.

Naturally the intern and resident selection committees chose those whom they felt were among the most promising.

**Attractions** What are PGH's attractions? With little doubt, its chief assets include its large number of patients, some 75,000 receive in- or out-patient

### New Clinic

The only municipally-supported clinic for psychiatric care of juveniles in the Philadelphia area has been in operation at the Philadelphia General Hospital since September.

Because of a limited staff, only youngsters deemed likely to respond to treatment are accepted. They are treated by the clinic's director, Dr. A. F. Bonan and by psychiatric resident physicians.

The Children's and Adolescents' Clinic has a long waiting list of children who have been interviewed and require psychiatric help. More than 400 parents have sought help for their children since the inception of the Clinic, but due to limited facilities, only 35 juveniles, 18 years or younger, have been accepted for treatment thus far.

The Clinic interviews youngsters referred to it by parents as well as school systems, courts, youth study centers and other departments at Philadelphia General Hospital. Full-time staff members include a psychologist who administers tests, and two psychiatric social workers who interview for admission.

care yearly. Nearly every ailment suffered by North American inhabitants appears among them.

Moreover, all are ward patients and therefore available for teaching purposes.

A significant breakdown of the figures shows the in-patient daily census to be about 2,000. Some 240,000 out-patient visits are made to PGH clinics yearly. Physicians in the Receiving Ward see about 250 patients daily.

**Medical Staff** Another asset is the medical staff of 550 visiting chiefs. Most of these men and women are faculty members locally at Jefferson Medical College, Women's Medical College, Hahnemann Medical College, University of Pennsylvania Medical School, Temple University Medical School, or the Grad-



Living quarters in the Doctors' Home at Philadelphia General Hospital.

uate School of the University of Pennsylvania.

Direction of nearly all departments is in their hands. Certain departments, however, have full-time chiefs.



Surgeons at work in one of eleven new Philadelphia General Hospital operating rooms. These rooms are explosion-proof and air-conditioned.

Presence of these men and the select group of interns and residents creates an intellectual climate in which eclecticism predominates: perhaps every major diagnostic and therapeutic approach is represented.

**Lectures, libraries** To supplement intramural stimulation, the physician has available numerous lectures sponsored during the academic season by the medical schools, the College of Physicians, the Philadelphia County Medical Society, and many other groups in the Philadelphia area.

In addition, the City has many fine libraries. On hospital grounds there is a brand new, lounge-type library containing 5,000 texts and bound volumes of some 180 medical journals.

Immediately behind the hospital is the University of Pennsylvania with its general and technical libraries. Also close by are the Free Library of Philadelphia and the Library of the College of Physicians.

**Society** The Blockley Research Society is one of several social and profes-



Dr. Alfred C. LaBoccetta, medical director at Northern Division, examines a child recovering from polio. Northern is the major polio center in the Philadelphia area.

Below: Dr. Joseph J. Rupp, endocrinologist at the Jefferson Hospital, is guest lecturer at a Mills building conference for interns and residents.





The X-ray Department presently is undergoing modernization and expansion which will increase its size four-fold.

sional hospital organizations for interns and residents. It functions to stimulate research by holding regular meetings at which papers are read and discussed.

**Recreation** For recreation, the PGH house staff has all the advantages a metropolitan center can offer: center city theaters and restaurants are ten

minutes away by fast subway transportation.

The number of residencies at PGH varies somewhat each year. Ninety-four are paid for by the City, and are constant. Another five to ten are available depending upon grants from the Federal government and private industry.

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### AN EXERCISE IN DIAGNOSIS— THE CASE REPORTS

**I**N addition to our regular quota of original articles, "Refresher" articles and departments, this issue, and every issue, contains selected Case Reports. You will find them on pages 1367-1372. We recommend these studies as interesting and stimulating.

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# How to Buy Office Equipment

**Knowing what you need is half the battle. Draw up a plan and stick to it. Buying what you don't need is a costly waste. The equipment companies can help you—if you'll let them**

K. C. LITTLE

It has always been a source of amazement to me how the average physician buys his office equipment on impulse, often without planning of any kind.

I think there are certain basic, common sense rules which apply to any purchase running into thousands of dollars. This is true in purchasing a home or a car. It is equally true when the specialist is ready to consider the purchase of office equipment.

One of the first elements that should be considered in selecting medical office equipment is its location in your office layout. It is not unusual for a physician to order his equipment and find, upon delivery, that he can't fit it into the office space he has already leased or purchased.

**Basic Plan** As rule number one in your planning, you would be wise to take a piece of graph paper and lay out, to scale, the various rooms which you contemplate furnishing. Don't forget to include the nooks and crannies since they can be utilized to good ad-

vantage in placing certain pieces of equipment.

Many manufacturers and most of the large medical supply houses, and many office equipment agencies for that matter, offer some sort of a plan with alternate layouts already prepared. Generally there is no charge for this service although some make a token charge which is then deducted from any equipment purchases you make through them.

**List Important** Second, draw up a list of all the equipment you expect to buy. List the major pieces which you feel are absolutely necessary for your beginning practice. Next, list all other items, not excluding such things as storage for drugs, desk, chairs, bookcases, storage for the many forms, records, letter heads, etc., you will have.

After you have decided what you need in the way of equipment, and what you must have in the way of space, you are ready for a third step. We might call this *shopping*.

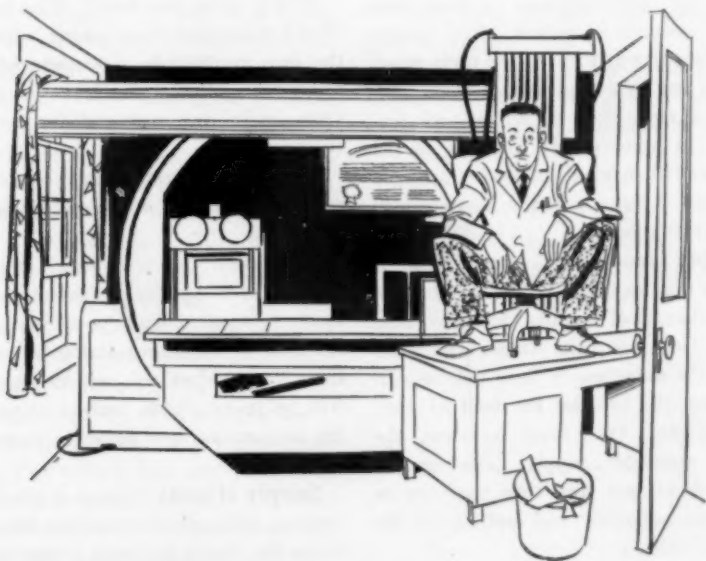
**Shopping** Very often equipment salesmen meet with physicians who don't particularly care to shop, that is, compare one piece of equipment with others of the same type. There is no question that shopping takes time. After all, it is a process of education, learning the various features of many brands of the same items of equipment. There are differences in price, size, appearance, warranties, and even financing terms.

I can tell you from my experience that the physician who shops can save 20% or more in actual equipment cost and still end up with equipment to fit his needs. This comes not through price comparison alone, but through eliminating from consideration those pieces of equipment which have added features at added cost—features which you don't particularly need (but would pay for, just the same). You will often find another piece of equipment of standard

manufacture which serves your purpose as well, or better, and at considerable savings in your cost.

Remember, you rarely get more than you pay for. But frequently you pay for more than you need.

**Advertisements** Well, you may wonder how does one begin to shop. Actually you have already taken at least two steps in the direction of shopping. First, you have used certain pieces of equipment in your training. You are familiar with the maker and with the features. Also, you have read the advertisements of equipment and furniture manufacturers carried in medical journals. Perhaps you were not interested in what these advertisements had to offer a year ago, but now that you are thinking of moving or refurnishing your office within the next six months or a year, you will begin to read the ads more closely. This is basic to the shopper's plan.



**Write for Information** After you acquaint yourself with some of the features of certain brands of equipment, you should go one more step. Actively seek out more information on those items of equipment you think you will need. The best way is to write directly to the manufacturers.

Manufacturers generally have illustrated (and informative) brochures describing their products, together with prices. Of course, these may not give you the complete picture. For instance, if you are looking for x-ray equipment, you may know of one or two or three makes. You may not know that such companies as Picker, Westinghouse, Mattern, Profex, Fisher, Continental, General Electric and others make x-ray equipment or that Allison, Alma and others have physician's office furniture. Where can you find a list of manufacturers?

**Salesmen** Now we are back into my business. That's my full time job. I know the manufacturers. I have seen their products in action. And what's more important, I have seen their products in use over a period of years.

A salesman knows prices and features. In other words, any one of the hundreds of surgical supply or furniture salesmen is in a position to help you in your shopping.

**Major Lines** Of course, there is always the question of picking the right medical-surgical supply firm to deal with. Generally, the larger the company, the more major lines will be carried and the broader the field of your comparison. One thing is sure, the large, reputable supply firms are in business to stay and thus they try to maintain agencies and outlets of the highest caliber.

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The author gives you the benefit of nearly twenty years experience in the medical-surgical supply field. He reports: "What I've put down here is a mixture of what might be called 'inside information' larded with common sense. For example, you may wonder if the manufacturers or equipment dealers aren't out to take you for all they can. Here's where the common sense comes in. If they have a good reputation, they want to keep it. They can do this only by giving you dollar value for dollar received. On the other hand, if they have a questionable reputation, or no reputation at all, you shouldn't be dealing with them in the first place."

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**Near Your Practice** It probably would be best for you to pick a firm in or near your own area. Being close to your supply house is not only a convenience, but in time of emergency, a very real measure of comfort.

Which is the best firm? Who knows. That's somewhat like asking which is the best automobile manufacturer. All represent a product which the car buyer rates in his own way and for his own reasons.

The larger firms have established reputations which are measured in the same way.

Don't pour out your heart and soul to the first equipment salesman you meet, however. Wait until you know his firm by recommendation or reputation. Then, when you ask his help you will be more nearly certain of getting his cooperation and assuring your own satisfaction.

**Supply Houses** I think a good suggestion, although it is seldom followed, is for the doctor to make a visit to one

or two medical supply and furniture houses. Look over the field. Ask questions. Discuss features and prices. Don't buy. For a time at least, be a "looker" and a "listener."

You are always welcome to look at equipment and the men on the floor will be glad to answer your questions.

Keep in mind that features and prices are what you will be discussing and, if you are wise, write these down so you will have a ready comparison sheet to work from later on. I think you will find it quite interesting to look over different pieces of equipment. And believe me, it will save you money.

**Expense** Is the most expensive piece of a particular type of equipment necessarily the best? Many physicians ask this. To this day, I have found no answer. I believe that if you ask the same question in the auto market, you will find there is no absolute answer. To keep our analogy consistent, all automobiles will generally take you where you want to go. Some will do it faster. Some in better style. Others more comfortably. But you still get where you want to go. Yet it costs more to travel in style, go faster, be more comfortable or carry more chrome. The question is, do you want four-door, pushbutton, super-deluxe item of medical equipment . . . or will the standard, "family" model do you?

That's strictly up to you.

However, by comparing and checking features of different makes of medical equipment, I am sure you will be able to find just exactly what you require.

**Used equipment** Many physicians tell me they wish to buy used equipment and furniture instead of getting all new. I can tell you this: it is sometimes possible to purchase re-conditioned equip-

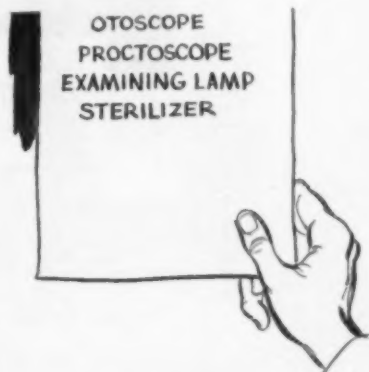


ment at a saving, but in general it is a very poor practice.

For the purchase of such items as an EKG, basal metabolism, x-ray, or any item that is of an electrical or mechanical nature, it is always advisable to buy new.

If you must buy used equipment—and many residents must, always do so through a reputable dealer. He's the one who gives the guarantee (usually one year, unconditional). He is also the person you will call when something goes wrong.

It has been my experience with physicians purchasing equipment that the worst possible place, statistically speak-



ing, to purchase used equipment is through another physician. No matter how honest he is or how sincere, he has no idea what may happen to his equipment the day it leaves his office. But plenty can happen and often does. Also, you must transport it, pay for installation. And give up the idea of a guarantee.

Is the equipment used in your hospital the best for you? Strangely enough many physicians think so. I say strange, because it is strange to me as an equipment salesman to figure the reason. Very often they have never seen another kind of equipment, yet they are willing to choose without comparison. As you know, not every manufacturer can get his particular equipment into every hospital. Actually, then, you have had only a limited view of what's available.

**Discounts** How about discounts? Yes, this is a common practice in equipment sales in many parts of the country. Many surgical supply houses will give you some discount on items purchased. The amount will vary with practically every item you require. For example, there are certain pieces of equipment

which are considered specialty items. These have very small discounts, if any.

As a rough estimate, you can figure on 10 to 15 per cent off the recommended list price on major pieces of equipment.

Some medical houses will offer a package deal where a large money amount is involved. Actually this is not necessarily a saving. You may be charged *full price* (no discount) on one item while some other item is "thrown in at no charge." But, if you are a smart buyer and have shopped around as suggested in this article, you'll be able to tell whether you are getting a good deal or not.

#### **Financing** What about financing?

As mentioned, there are the banks and the medical supply houses or the manufacturer. The medical supply houses will take promissory notes on your equipment and you can pay monthly through your bank. That is done on a short repayment plan, say six months or a year. You can often accomplish this financing at no interest.

If you prefer to pay over a longer period of time, it is possible to obtain



a bank loan at moderate rates of interest, for a period up to five years. Check the provisions of your GI-Bill loan guarantee.

The trend today seems to be toward financing over a period of from two to three years or even more; this is in preference to direct cash outlay. I suggest this type of payment only if the loan is obtained through a large banking institution.

One thing you should be warned of in advance. Check into any equipment deal which permits you to pay for your equipment over a long period of time *without having it financed* through a bank. When this type of deal is offered, it may well mean that such a large profit has been made on the sale through overcharging that there is no need to rush you for payment. Since most companies work on a normal business profit margin, they must have their money within a reasonable period of time.

In conclusion I can only suggest that outfitting an office is probably as important a step as you will make in your professional career. Many of the pieces of equipment you buy will be with you throughout your practice. Some of them will determine, to an extent, the measure of medical care you are able to provide. It is imperative that you know with whom you are dealing. Reputation in the office equipment field is important.

One recommendation of one doctor friend may not be sufficient reason for your choice of equipment suppliers. However, asking other physicians is a



"Well, while its true I haven't used it yet, you never can tell when a case of . . ."

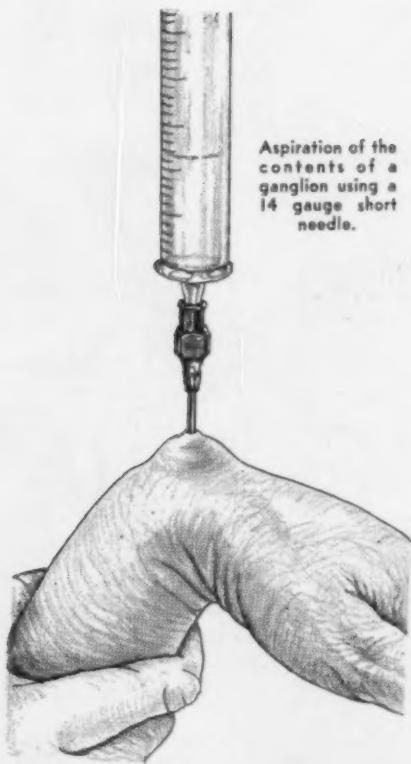
wonderful way to get a line on the medical supply firms.

Finally, since you don't furnish an office every day, it would pay to give lots of time to planning. If you know

what you want and what features you need in your equipment ahead of time, you have practically insured your own satisfaction with your eventual purchases.

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### Clini-Clipping



Aspiration of the contents of a ganglion using a 14 gauge short needle.

# Investing For The Successful Physician

Prepared especially for Medical Times by C. Norman Stabler,  
market analyst of "The New York Herald Tribune."

## POINTERS ON TAX SAVING

Buying and selling securities at the right time is the first step in making money in the market. Next in importance, and running it a close second, is understanding the tax laws.

Time is running short to settle your account for 1956. If your operations for this year show an unbroken string of profits, you don't have too much to worry about. It's just a matter of paying the bill.

Few are so fortunate. A careful perusal of provisions of the Revenue Act concerning trading in securities can make the difference between a good year and a bad year.

A knowledge of these provisions, and their application, is not tax dodging. Each provision was written into the Act for a purpose. It is the part of wisdom to take advantage of them. They constitute tax savings, or tax avoidance, both of which phrases are more accurate

and much more pleasing to the ear.

There are very few active investors in the country who will have no use for one or more of the provisions which permit thoroughly legal, and respectable, reductions in their prospective tax bill.



C. Norman Stabler

It is necessary to act well in advance of the close of the year. That is because of the four-day delivery rule, which applies to securities traded in on the New York Stock

Exchange and other leading Exchanges.

Because of this delay in delivering securities it is necessary for the investor who is taking a profit to sell more than four business days ahead of the close of the year, if he makes his sale in the regular manner.

If you wish to take a profit and have the transaction recorded on your 1956 return, you should sell on or before December 24. That is because the next day is Christmas, and Exchanges will be

closed. Sales on December 26 would not be cleared until the new year. Sales can be made for "cash and immediate delivery" right up to the close of the year, Monday, December 31, but this is not the usual procedure, and frequently the seller has to give a little concession on the price if he resorts to this method of trading.

The above does not apply to the investor who is selling to take a loss. The reasons for this is that the Tax Court of the United States has ruled that, for tax purposes, profits are taxable when "realized" and that losses are allowable when "sustained."

Profits are not considered "realized,"

for tax purposes, until the securities sold are delivered to the buyer. A loss, on the other hand, is said to be "sustained" when the sale is made on the floor of the Exchange, regardless of the time of the delivery. Therefore, losses may be taken, and recorded on your 1956 tax return, right up to the close of business December 31.

The rule on taking profits applies to taxpayers reporting on a cash basis; and virtually all individuals report on a cash basis. Taxpayers on an accrual basis can establish profits by sales made up to the last minute; and most partnerships and companies are on an accrual basis.

## EXAMPLES OF TAX SAVINGS

Don't wait until January to formulate your program of tax saving. Review your market operations of this year within the next few days, to determine your immediate course of action.

If you have a preponderance of gains, or of losses, bring the account nearer into balance by selling selected securities. In other words, sell at a profit to offset accumulated losses, or sell those showing a loss if you need them as an offset to profits.

In a few cases, where an investor's account is already pretty well balanced, take enough additional losses to establish an excess of losses of \$1,000, as this amount may be deducted from your other income, such as salary, dividends or interest.

If you are fortunate enough to have several securities of a long-term character, which show you a good paper profit, review your portfolio with the thought of taking some of these profits, as only

50 per cent of the actual gain is subject to tax at regular rates, and the tax is limited to a maximum of 25 per cent of the actual gains.

Additional pointers on possible tax savings were recently issued by the firm of Francis I. duPont & Co. They include the following:

If you have 1951, 1952, 1953, 1954 and 1955 net capital loss carry-overs, use these to offset 1956 net capital gains.

If you have an excess of short-term gains, offset these with losses.

To reduce gain or increase loss, sell high-cost lots. Conversely, to increase gain or reduce loss, sell low-cost lots.

Recognition should be given to the

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The information set forth herein was obtained from sources which we believe reliable, but we do not guarantee its accuracy. Neither the information nor any opinion expressed constitutes either a recommendation or a solicitation by the publisher or authors for purchase or sales of any securities or commodities.

status of long-term losses under the now effective regulations whereby 100% of these losses can be used to offset short-term gains. By careful study of one's securities position, it is possible that short-term profits can be taken on a "tax free" basis, offsetting these gains by sales of securities on which there is a long-term loss. In effect, this provides a dollar-for-dollar offset.

If your excess of losses (including 1951, 1952, 1953, 1954 and 1955 net capital loss carryovers) over profits is more than \$1,000 and you have paper profits, establish gains to cancel the extra losses. This insures against future revision or elimination of the five-year carryover. It reduces the amount of future profits subject to tax.

Where the full 4% dividend credit is subject to the taxable income limitation, sell for capital gain to increase your taxable income. Under such a procedure, the effective tax on this capital gain will be less than otherwise.

Losses on sales made directly or indirectly between members of a family are disallowed. The United States Supreme Court has held that where practically simultaneous sales and purchases of the same securities by husband and wife were effected on a stock exchange to and from persons of unknown identity the sales were indirectly between the spouses. Accordingly, the losses were disallowed.

Use "taxtime" to clean out "deadwood" in your portfolio. Penny stocks may be worth many dollars in tax savings.

Specify, at the time of sale, lot to be sold if certificate identification is impossible.

On sales to establish losses, the substantially identical security, or options

to purchase such securities, may not be repurchased for 30 days (before or after date of sale), but a similar issue may be bought immediately.

A holder of securities who wants to sell his stocks or bonds to establish a "tax loss" and yet maintain his position can: (A) Sell his securities. Wait until after 30 days and then buy back the issues sold. (B) Sell his stocks or bonds and immediately buy comparable, not identical securities, as for example, different stocks in the same industry or bonds of the same rating, maturity and yield. Then, after 30 days, the holder may reverse his transaction and repurchase the original securities held. (C) Buy an additional amount of stocks or bonds, doubling the original commitment. Carry this position for 30 days. Then, sell the original stocks or bonds held, establishing the tax loss, yet retaining a position equal to the original commitment.

Sell doubtful securities before they become worthless.

Should tax rates on individual incomes be reduced next year, "tax savings" in 1956 may have a greater value than they would in 1957.

Remember that when you effect tax savings through use of the capital gain and loss provisions of the Revenue Act you are saving taxes in your highest bracket. For example, if your surtax net income (including capital gains) is \$10,000, you will have a normal and surtax liability of \$2,640 (on a single return), or at the rate of over 26%. However, you can offset this with \$1,000 of losses, reducing your surtax net income to \$9,000, on which your normal and surtax will be \$2,300, or 23%. This would represent a saving of \$340 or 34% on the \$1,000 of losses taken.

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## A WORD OF CAUTION

In establishing a loss for tax purposes, the investor should take care not to rebuy the stock within thirty days after the date of the sale. This would violate the so-called wash sale ruling of the code, and the Internal Revenue Service would set aside the loss which he had intended to use. Securities sold to establish profits may be repurchased immediately.

If the investor bought additional stock ahead of the time of his sale, doubling his investment in the stock in which he has a loss, in anticipation of realizing the loss before the end of the year, this additional buying also must have been completed on a day at least thirty days removed from the sale date.

## WAY TO POSTPONE TAX ON PROFIT

The above applies to the investor who wishes to take a loss and have it on his 1956 return. There is also a gimmick the investor can use in the event he has a profit he wishes to take, but would prefer to have it recorded on his 1957 tax return. Of course he can wait until December 26, and sell in the regular manner, and the transaction is then completed by the delivery of the securities in 1957. That postpones his tax liability for another year.

If he wishes to realize his profit before December 26, he can sell an equivalent amount of securities short. On January 2, or thereafter, he then orders his broker to deliver his long stock against his short commitment. That clears the books and makes it a 1957 profit.

MEDICAL TIMES

## SHORT TERM AND LONG TERM

In all discussions of capital gains or losses, whether applied to securities or other assets, the differentiation between a short-term period and a long-term period is six months and one day. Don't forget that one day. In other words the time must exceed six months. Stocks bought June 30 and sold December 30 would be considered a short-term transaction. Sold on December 31, it would be a long-term transaction.

Commingling net short and long-term capital gains and losses is allowed. Each is considered at 100 per cent. In the event that one's net long-term gain exceeds his net short-term loss, the resultant figure is cut in half (because it represents a long-term balance) and this is then taxed at the regular rate. It is limited by the maximum tax, which is 25 per cent of the actual gain.

Capital losses, short or long-term, are taken into account at 100 per cent. Thus long-term losses may offset short-term gains, just as short-term losses may offset long-term gains, both on a dollar for dollar basis.

In the event one's long-term losses exceed his short-term gains, the unreduced excess can be used to offset other income up to \$1,000 for the current year. Any loss which is not absorbed in this manner can be carried forward to future years as a short-term capital loss (whether arising out of short or long-term operations) for the next succeeding five years.

## BUSINESS, UNLIMITED

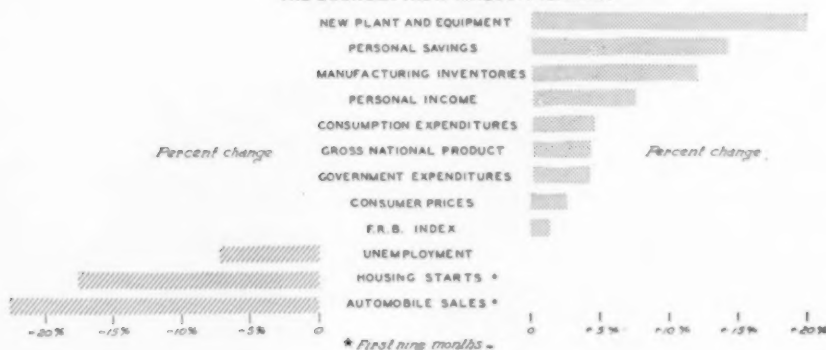
Business activity is approaching the limits set by manpower, materials and

(Vol. 84, No. 12) December 1956

for  
prolonged  
vasodilation  
in chronic  
circulatory  
disorders



# THE ECONOMY : NOW VERSUS A YEAR AGO



plant capacity, observes the Chase Manhattan Bank. It notes that:

- The number of people at work has grown by the remarkable figure of 2 million in a year. Unemployment is down to 3.3% of the labor force—below the minimum number usually moving from job to job.
- Steel mills are running at a rate slightly above theoretical capacity, and new orders are pouring in.
- Auto producers have scheduled output of 1957 models at a 7 million rate for the rest of the year.
- Exports ran 25% ahead of a year earlier during the first eight months. Sales to Canada and Western Europe showed the largest increase.
- Retailers expect a record holiday

season and are placing more new orders with manufacturers.

As a result, the industrial production index should soon surpass last December's record of 144.

"The major impetus for expansion," the bank observes, "continues to come from the investment sector. Businessmen plan to invest in new plant and equipment at a \$38,000,000,000 rate in the current quarter. That's \$6,500,000,000 (20 per cent) more than the rate a year earlier.

"Demand is rising in other sectors, too. Consumer expenditures are on the increase, spurred by higher incomes. And government spending has turned up."

The Bank supplied the above chart to illustrate the changes from last year.

## A LOOK AT MIDDLE EASTERN OILS

The Middle East forms a section of the globe that is ever on our front pages. As this is written, it is the number one trouble spot in international affairs.

Money is timid, and one might there-

fore conclude it is not likely to rush to an area that is in conflict. The vast wealth of petroleum in the Middle East however, has attracted American and other foreign capital.

The firm of Burnham & Co. is con-

vinced American investors should know more about these companies and their investment prospects. Prior to the Israeli invasion of Egypt it published a book on the subject, "Foreign Oil, An Examination of its Projected Growth," (Burnham & Co., 15 Broad St., New York City, 115 pp., \$5).

In this it holds: that petroleum is the world's fastest growing source of energy, that demand for it should rise 75 per cent in the next ten years, that this demand will increase in the foreign part of the free world about twice as fast as in the United States, and that 75 per cent of the free world's oil reserves are lodged in the Middle East. This convinces the firm that any growth in demand such as has been projected must be supplied in large measure by wells of the Middle East.

Most of the major American oil companies already have an interest in one or more of these foreign concessions. To name but a few there are Standard Oil (N.J.), Standard of California, Cities Service, Texas, Gulf, Socony Mobil, Richfield, Standard of Ohio, American Independent, Signal Oil & Gas, Atlantic Refining, Tidewater, Hancock, Phillips, Ashland, Sunray Mid-Continent, San Jacinto, the Getty interests, Edwin W. Pauley Co. and George E. Allen and other American interests.

We are less well acquainted with five major foreign companies that are even more active in that part of the world, even though the securities of several of them are now securing a wider distribution in our markets. The Burnham & Co. survey concentrates therefore on these five.

They are the Royal Dutch/Shell Group, British Petroleum, Burmah Oil, Cie Francaise des Petroles and Com-

pagnie Financiere Belge des Petroles, known as "Petrofina."

The Royal Dutch/Shell Group has a world-wide refining and marketing organization, the largest tanker fleet in the world and crude reserves in North and South America, the Middle East and the Far East. Burnham says it is better placed than the others to profit from the rapidly growing demand in the free foreign world and is exposed to proportionately less risk in the Middle East than most. It regards the stock as "markedly undervalued by comparison with the stocks of similar American companies."

The British Petroleum Co., Ltd., is recommended for the investor "who seeks to buy oil in the ground." That is because the survey credits this company with about 15 per cent of the free world's known crude reserves, virtually all in the Middle East. The company is a major refiner and marketer, and has the world's second largest tanker fleet. Its operations in North America are relatively small and it lacks the geographical diversification of Royal Dutch/Shell, and the firm believes its shares are subject to a greater element of risk.

Burmah Oil Co., Ltd., is principally an investment company, owning 26.5 per cent of British Petroleum and a smaller but important holding in Shell Transport & Trading, the British partner in the Royal Dutch/Shell Group. It has its own operations in India, Burma and Pakistan.

Compagnie Francaise des Petroles is a major French company which controls important Middle East reserves. Burnham & Co. expresses the view that "the uncertain outlook for the French economy and the franc are deterrents to the American investor at the present

time. At some future time it may appear that the risks in this situation are adequately discounted in the price. . . ."

Compagnie Financiere Belge des Petroles, "Petrofina" is an aggressive Belgian company. The analysis says it cannot be truly classified among the international oil companies, as it lacks

major production and reserves, but "it has developed its refining and marketing facilities with phenomenal speed and success in Europe, North America and elsewhere." The analysis adds, "It is in a fair way to become one of the most important foreign companies in the international oil industry."

## CURRENT FINANCIAL REPORTS

The following are among the current analyses, reports, letters or comments which have been issued recently by various financial firms:

COMPANY	FIRM	N. Y. ADDRESS
Ruberoid Co.	Bache & Co.	36 Wall
American-Marietta	Bache & Co.	36 Wall
Montgomery, Ward & Co.	Jas. H. Oliphant & Co.	61 Broadway
U. S. Smelting, Ref. & Mining	Bruns, Nordeman & Co.	52 Wall
Minn. & Ontario Paper	Francis I. du Pont & Co.	1 Wall
Schering Corp.	Granbery, Marache & Co.	67 Wall
Sinclair Oil Corp.	Osborne & Thurlow	39 Broadway
Mesabi Iron	Osborne & Thurlow	39 Broadway
Mesabi Iron	Hayden, Stone & Co.	25 Broad
Transamerica Corp.	Hayden, Stone & Co.	25 Broad
Ford Motor Co.	Lehman Brothers	1 So. William
Grocery Chains	E. F. Hutton & Co.	61 Broadway
Progress Mfg. Co.	E. F. Hutton & Co.	61 Broadway
Pittston Co.	H. Hentz & Co.	60 Beaver
Chicago Corp.	H. Hentz & Co.	60 Beaver
Southwestern Pub. Serv.	Eastman Dillion-Union Sec.	15 Broad
F. W. Woolworth Co.	Thomson & McKinnon	11 Wall
General Dynamics Corp.	Thomson & McKinnon	11 Wall
Neptune Meter Co.	J. R. Williston & Co.	115 Broadway
Cement Stocks	Pershing & Co.	120 Broadway
Detroit Harvester	Amott, Baker & Co.	150 Broadway
Boeing Airplane Co.	Stanley, Heller & Co.	30 Pine
Marchant Calculators	Harris, Upham & Co.	120 Broadway
National Starch	Harris, Upham & Co.	120 Broadway
American Cyanamid	Harris, Upham & Co.	120 Broadway
American Insurance of Newark	Paine, Webber, Jackson & Curtis	25 Broad
Remington Arms	Bregman, Cummings & Co.	100 Broadway
Dan River Mills, Inc.	Kamen & Company	25 Broad
Revlon, Inc.	Reynolds & Co.	120 Broadway
Leeds & Northrop Co.	Reynolds & Co.	120 Broadway
Boeing Airplane	Hirsch & Co.	25 Broad

## How to pick tomorrow's blue chips...

Management must be excellent and progressive. The stock does not have to be listed on a major exchange. But it must have growth potential. It should be in a good financial position, something that is not always reflected in the current stock price.

When a good aggressive company has these qualifications there's every opportunity for its stock becoming very valuable.

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We have information on what we consider especially attractive buys—companies that aren't giants today, but may be in the future.

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Steadily increasing exploration and production costs in America furnish one reason why more attention is being paid to the low-cost producers of the Middle East. That is also a factor when considering oil properties in Latin America. The analysis states that the cost per barrel of petroleum in the U. S. increased from 63 cents in 1940 to \$1.28 in 1955. These costs include lease rentals.

"The general inference," the firm says, "is that most of the 'easy' oil in this country has already been found. This is not so in the Middle East, with its vast reservoir of cheap proven oil, and its discovery wells which produce thousands, or tens of thousands, of oil daily. The uptrend of finding costs underlines the advantage of those companies which operate in the Middle East.

### FORBES' SUGGESTED INVESTMENTS

Investors Advisory Institute, Inc., a subsidiary of Forbes, Inc., recently compiled four lists of stocks which it recommended. Prices are as of the end of October, but can be easily readjusted by

the reader from his daily newspaper.

The tables (on facing page) are divided into those which it recommended for appreciation, growth, liberal income and stability and income.

### THE 1957 OUTLOOK

This is the season of the year when corporate executives, economists and ordinary Joe Smiths issue their predictions for the new year. The vast majority of the current predictions are optimistic.

New York Hanseatic Corporation, dealers in government bonds, state and municipal issues and corporate securities, lined up its thoughts for 1957 in mid-October.

It believes that the year will start with the customary "breather" after the holiday season. Projecting present trends and economic needs however, it says, indicates that thereafter growth for which the foundation already has been established will take place.

"Corporations have built-in requirements for modernization and expansion," it says, "while the cost of research now is found to be the biggest

bargain of all. It is anticipated that business spending for these classifications will increase moderately next year. Disposable personal income should again advance in line with continued high corporate earnings and dividend payments. Over the 12 months, gross national product or expenditure likely will exceed \$425 billion.

"These reasonable expectations cover both the immediate and longer term periods. They should be nothing but encouraging to the consumer, business, and investor alike, because they imply better living standards for the first, satisfactory earnings for the second, and continued favorable portfolio return for the last.

"In summary, nothing visible has changed in consumer and business conditions that heretofore were responsible for record economic expansion. Easing

## APPRECIATION

	EARNINGS		DIVIDENDS		1956 Price Range	Recent Price	Yield Based on Ind. Rate
	1955†	1956	1955	Rate‡			
*Air Reduction .....	\$3.21	9m \$3.21	\$1.50	\$2.00	50 3/4-36 3/8	47	4.3%
Cities Service .....	4.88	6m 3.01	2.10	2.40	73 1/8-54	59	4.1
*Columbia Broadcasting "A" .....	1.83	(1) 0.71	0.80	0.80	32 1/2-22 5/8	29	2.8
*Combustion Engineering .....	1.78	6m 1.14	1.00	1.12	30 3/4-23 3/8	26	4.3
*Diamond Alkali .....	3.38	9m 3.07	1.50	1.50	60 3/4-43 1/2	50	3.0
Dresser Industries (10-30-55) .....	5.15	9m 5.68	2.375	3.60	90 1/2-49 3/8	89	4.0
International Tel. & Tel. ....	3.21	6m 1.74	1.20	1.80	37 1/2-29 1/4	32	5.6
*Norwich Pharmacal .....	3.01	9m 2.43	1.40	1.95	63 1/2-47 3/8	54	3.6
St. Regis Paper .....	2.95	9m 2.40	1.80	2.00	60 3/4-40 3/8	49	4.1
Sheraton Corp. (4-30-56) ..	1.80	3m 0.30	0.45	0.60	15 1/2-13 1/4	14	4.3
Sinclair Oil .....	5.68	6m 3.10	2.70	3.00	72 3/4-55 3/8	59	5.1

## GROWTH

American Cyanamid .....	\$4.07	9m \$3.18**	\$2.50	\$3.00	77 1/8-61	70	4.3%
*Owens-Illinois Glass .....	(5) 4.46	(5) 3.97	2.12	2.50	81 1/2-61 1/4	67	3.7
*Pennsylvania Salt .....	2.80	9m 2.36	1.85	1.85	66 1/2-45 3/4	56	3.3
Phillips Petroleum .....	2.78	9m 2.08	1.50	1.70	55 1/4-39 3/8	49	3.5
Royal Dutch Petroleum ....	11.05	6m 5.80	1.75	2.63	115 1/2-79 3/8	105	2.5
Sperry Rand (3-31-56) .....	1.80	3m 0.39	0.68	0.80	29 1/2-23 3/8	24	3.3
*Sylvania Electric Products..	4.29	9m 3.23	2.00	2.00	55 1/2-42	49	4.1

## LIBERAL INCOME

*Chesapeake & Ohio .....	\$7.25	9m \$5.95	\$3.12	\$3.50	68 3/4-53 3/4	67	5.2%
*Cluett, Peabody .....	4.09	9m 2.72	2.50	2.50	50 1/2-39 1/2	40	6.2
Commercial Credit .....	(2) 5.02	(2) 5.26	2.65	2.80	54 1/2-44 3/8	46	6.1
Great Northern Railway .....	5.27	9m 3.64	2.35	3.00	46 3/4-38 3/8	44	6.8
Marshall Field (1-31-56) ..	3.49	6m 1.02	2.00	2.25	37 1/2-32 1/2	37	6.1
Seaboard Air Line R.R. ....	4.53	8m 2.95	2.38	2.50	44 1/2-35 1/2	37	6.7
Seaboard Finance (9-30-56)	1.17	9m 1.05	0.90	1.00	19 1/2-17 1/4	18	5.5
Simmons .....	5.31	6m 2.39	3.00	3.10	55 1/2-45 3/4	50	6.2

## STABILITY AND INCOME

*Columbus & Southern Ohio Electric .....	(2) \$2.15	(2) \$2.16	\$1.60	\$1.60	36 3/8-28 3/4	30	5.3%
*Iowa Power & Light .....	(2) 1.93	(2) 2.00	1.40	1.40	27 1/4-24 3/8	25	5.6
*May Dept. Stores (1-31-56)	3.10	6m 0.72	1.90	2.20	48 1/2-38 3/8	40	5.5
*Ohio Edison .....	(5) 3.44	(5) 3.72	2.27	2.48	58 1/4-49 3/8	50	5.0
*Pacific Gas & Electric .....	(2) 3.18	(2) 3.51	2.20	2.40	53 3/4-47	48	5.0
*Public Service Electric & Gas	(5) 2.19	(5) 2.38	1.65	1.80	35 1/2-32	32	5.6
Puget Sound Power & Light	(4) 1.48	(4) 1.61	1.16	1.28	29 1/2-22 1/2	25	5.1
South Carolina Electric & Gas	(4) 1.37	(4) 1.41	0.87	1.00	20 3/4-17 3/8	19	5.3
Southern Company .....	(5) 1.39	(5) 1.50	0.90	1.00	23 1/2-19 1/4	21	4.8
West Penn Electric .....	(3) 1.98	(3) 2.10	1.27	1.40	29 1/2-25 1/2	27	5.2

†—For companies whose corporate years end on a date other than December 31, the earnings and dividends shown under the subheading "1955" cover, where available, the corporate year ending on the date shown in parentheses.

‡—Rate indicated by latest quarterly payment. ¶—Plus stock. \*\*—Excluding capital gains.

\*—Stocks with uninterrupted dividend records of 25 years or longer. †—Including extras.

(1)—26 weeks ended June 30. (2)—12 mos. ended June 30. (3)—12 mos. ended July 31. (4)—12 mos. ended August 31. (5)—12 mos. ended Sept. 30.

in stock prices would seem in order only to the extent that some values may have already discounted substantial future

corporate growth and earnings. Prospects still favor continued upward pressure on money rates."

## PAPER OUTLOOK GOOD

Stocks of paper companies have been a target of short sellers in the stock market recently. It was felt by many traders they had gone too fast and the industry was getting itself into a position where competition might have an effect on prices of certain grades.

As for the industry however, United Business Service, Boston, is optimistic on the longer-pull outlook, even though a few soft spots have appeared.

It notes that the rate of expansion in the paper industry has averaged about 7 per cent annually over the last seven years, as compared with a 6 per cent rate for total manufacturing. Technical progress, widening diversification, and

new capacity have contributed to the growth, it says, and earnings have been lifted by price increases which have largely counterbalanced higher wage and other costs.

There are some short-range weak spots. The Service notes that inventories have been built up in anticipation of higher prices. Demand is thus likely to be less strong than in many other lines over the near term. There are also some misgivings that the gain in new capacity has been too rapid. This is especially true in paperboard, which appears headed for a period of temporary moderate readjustment. Acute shortages of newsprint also seem to be ending.

### Guide For Investors

Based on recommendations of the Securities and Exchange Commission in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

1. Think before buying, guard against all high pressure sales.
2. Beware of promises of quick spectacular price rises.
3. Be sure you understand the risk of loss as well as the prospect of gain.
4. Get the facts—do not buy on tips or rumors.
5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects. Save all such information for future reference.

## EDUCATED DOLLARS

Colleges and universities have about 55 per cent of their endowment funds in common stocks, the semi-annual recapitulation of Vance, Sanders & Co., Boston, discloses. The most recent, showing the situation as of June 30, was made by Boston Fund, one of several underwritten by Vance, Sanders.

Averages show that the institutions had 30.5 per cent of their money in bonds or cash, 4.7 per cent in preferred stocks, 54.8 per cent in common stocks, 3.3 percent in real estate and mortgages, and 1.7 per cent in other investments.

## SELLING "SHORT" EXPLAINED

Selling short, which consists of selling something you don't own, is frequently misunderstood, even in the marketplace. At times it comes in for opposition on moral grounds, although there are fewer of these attacks in a bull market than when prices are sinking.

The practice is recognized by all markets as a thoroughly legitimate method of trading. Never the less, various rules and regulations have been thrown around it to avoid abuses. Most of these are of academic interest to the ordinary trader, who can sell short almost as easily as he can buy long. There is more bookkeeping for his broker however, and such sales receive somewhat different tax treatment.

Probably the most impressive defense against attacks on short selling as a way of doing business, is that markets are better balanced when it is permitted. Several European Exchanges tried barring it years ago. As a result they got

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into trouble and abandoned the restriction.

It was found that without the restraining influence of short sales, prices frequently did not reflect a true picture of values. If a stock continued to run up, beyond its conceivable true value, it was necessary to search for sellers who would liquidate, and thus keep the quotation more in line with the facts. That was not always easy.

The short seller fills this void; he is more inclined to be a speculator than is the purchaser of long stock. He is willing to take a chance, and sell something he doesn't own, if he feels it is overpriced. Eventually he will be on the buying side, because the time will come when he must even up his account. In the meantime he has rendered a service to the market, at his risk.

The difference in the tax aspect is that profits or losses on short sales of securities are always considered as short-term, irrespective of the length of time elapsed between the sale and the purchase.

This does not apply to sales for future delivery in the commodity markets. The reason is that when a farmer, trader or speculator sells short in the commodity market, he sells an actual contract which binds him to make delivery in a specific month. If the time exceeds six months it is regarded as a long-term investment.

In the case of stocks however, the shares you sell short are borrowed by your broker and are delivered in the usual manner. You don't own a contract. You own nothing. When eventually you cover your commitment, whether it is within six months or after a number of years, you are regarded as having made or lost as of that moment. Thus it is short-term.

In virtually all cases your broker will set up a separate account in your name when you sell short. This is so it won't become confused with your long account. This short account shows a credit balance in your favor, of so many dollars, but obviously it is not your money, to be withdrawn as you see fit. In fact your broker doesn't have that particular block of money either. He deposits it with the lender of the shares, as a safeguard.

You may sell short on margin, just as you can buy long on margin. Be assured however, that your broker is going to watch your account carefully, to make certain the maintenance requirements are observed.

The Federal regulation is that the margin must be 70%. Thus the maintenance figure is 30%. (This is Regulation T, and can be changed by the Federal Reserve Board without notice).

Aside from the Federal regulation, individual Exchanges, and their member firms can, and usually do, impose their own more stringent regulations.

Let's see what would happen to the margin in the event a speculator made an unwise short sale. We will assume he sold 100 shares of stock short at \$10. His short account thus shows a credit balance of \$1,000. Of this he must have deposited a minimum of \$700, and the so-called maintenance is \$300. The difference between the two figures is \$400.

If the stock advances a point, his maintenance moves up \$30 to \$330 and at the same time his equity is reduced to \$600 from the previous \$700. The above \$400 difference has now been reduced to \$270.

If the stock then advances an additional point his maintenance is upped to \$360 and his equity drops to \$500.

Now the difference is only \$140. The broker would look the situation over.

Up another point, to \$13 a share, and at this level the maintenance is \$390 and the equity drops to \$400. The difference is only \$10, or only ten dollars above the minimum requirements of the New York Stock Exchange.

In other words, any rise of roughly 30 per cent reduces a margin account virtually to the minimum requirements, and unless the short seller is able and willing to deposit additional cash or collateral, he will be bought in.

In actual practice firms usually have their own house rules, which are high, in order to provide a cushion in the event the market moves against their short customer. If he gets near minimum, he is required to settle promptly.

There are several rules in effect which are designed to keep the practice of short selling free of abuse. Probably the most important one is that short sales cannot be used to depress the market in any security.

By this it is meant that a short sale is never the cause of depressing a price, even by an eighth. To go short, the quotation must be up from its previous different price. It need not necessarily be up over the last sale.

On the floor they call this a "zero plus tick," in contrast to a "zero minus tick," when it is below its previous different price. Indicators at the individual posts, where the stocks are traded in, are changed by floor reporters to indicate whether the tick is plus or minus. The short seller can do business if it is marked zero plus tick, but not if it is marked zero minus tick. This effectively stops the practice, common back in the 1920's, of raids by short sellers to depress a price suddenly, so as to shake

out weakly margined speculators and provide the short selling speculators with an opportunity to cover their commitments at a profit.

There is another ruling, enforced by the S.E.C. This is that a broker cannot accept an order from a customer unless he finds out, and reports, whether it is long stock or short stock that is being sold. He must so designate it.

When the sale is completed it is printed on the ticker in the usual manner. There is no way for a tape watcher to know whether the sale he sees was of long stock or a short sale.

There are other rules applying to short selling but they are technical in nature and apply to a few special situations. They are rarely of interest to the ordinary investor, even though his broker must keep them in mind.

*Dear Doctor:*

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## MODERN THERAPEUTICS

### **Tetracycline in the Treatment of Acne Vulgaris**

Tetracycline is one of the newer anti-  
 biotics believed to be more stable, more  
 soluble, and the cause of fewer gastro-  
 intestinal symptoms than its analogues.  
 W. C. King and M. A. Forbes, Jr., of  
 Austin, Texas, *Southern Medical Jour-  
 nal* [49: 875 (1956)] report on the use  
 of the drug in connection with 203 pa-  
 tients, mostly students, in whom papulo-  
 pustules, pus and blood filled cystic  
 lesions, or hard, painful, indurated nod-  
 ules were present. In conjunction with  
 the tetracycline by mouth, they were  
 treated with a drying lotion, placed on  
 dietary restrictions, and encouraged to  
 wash the face with soap and water three  
 times daily. Therapy was given from  
 one to eighteen months. Dosages ranged  
 from 100 to 1,000 mg. daily. The de-  
 termination of a satisfactory dosage and  
 the period of administration proved to  
 be somewhat of a problem. The amount  
 of 500 mg. a day seemed to maintain  
 control of the pustular element, although  
 satisfactory response was obtained in a  
 number of instances from the use of  
 one or two 100-mg. capsules daily. Re-  
 sults of treatment were: complete re-  
 mission in 27; satisfactory, partial re-  
 mission in 165, and failure in 11 cases.  
 The only side-effect that occurred was

—Continued on page 104a

**MEDICAL TIMES**

*when allergic*

*and inflammatory dermatoses*

*call for strong measures...*

**NEW**

## **Meti-Derm**

prednisolone, free alcohol

**cream**

topically—approximately twice the per  
milligram potency of hydrocortisone

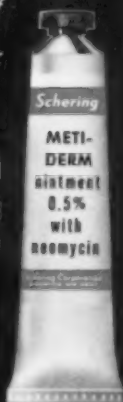
—cosmetically acceptable, water washable

*and when the prophylaxis of  
secondary infection is a factor*

**NEW**

## **Meti-Derm**

**ointment  
with neomycin**



*Schering*



**NOW, the extra assurance of**

*Meti-steroid strength and safety  
in topical skin therapy*

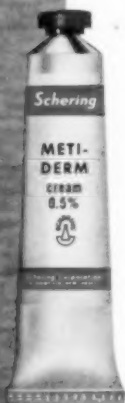
**NEW**

# Meti-Derm

cream

with METICORTELONE, original brand of prednisolone

*arrests itch, diminishes erythema  
lessens edema, reduces scaling  
speeds healing in*



**contact dermatitis**—from plants (e.g., poison ivy, oak), drugs, soaps, cosmetics, fabrics.

**atopic dermatitis**—allergic eczema, food eczema, infantile eczema, disseminated neurodermatitis, pruritus with lichenification.

**nonspecific pruritus** of anus, vulva, scrotum.

**Formula:** Each gram of METI-DERM Cream contains 5 mg. (0.5%) of prednisolone, free alcohol, in a water-washable base.

METI-DERM Ointment with Neomycin contains 5 mg. (0.5%) prednisolone, and 5 mg. (0.5%) neomycin sulfate equivalent to 3.5 mg. neomycin base.

**Packaging:** METI-DERM Cream, 0.5%, 10 Gm. tube.

METI-DERM Ointment with Neomycin, 10 Gm. tube.

METI-DERM,\* brand of prednisolone topical.

METICORTELONE,® brand of prednisolone.

\*T.M.

*Schering*

When the patient  
is under  
unusual stress...



# STRESSCAPS<sup>\*</sup>

Stress Formula Vitamins Lederle



A complete vitamin formula designed to ease the daily stress in modern living—to restore efficiency, to replace depleted essential vitamins. *One capsule daily.*

*Each Capsule Contains:*

Thiamine Mononitrate (B <sub>1</sub> )	10 mg.
Riboflavin (B <sub>2</sub> )	10 mg.
Niacinamide	100 mg.
Ascorbic Acid (C)	300 mg.
Pyridoxine HCl (B <sub>6</sub> )	2 mg.
Vitamin B <sub>12</sub>	4 mcgm.
Folic Acid	1.5 mg.
Calcium Pantothenate	20 mg.
Vitamin K (Menadione)	2 mg.

\* REG. U. S. PAT. OFF.



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

*Look what's happened to CALCIDRINE!*

*Syrup*

**CALCI**

*Improved*

*a golden new look  
a new apricot flavor  
and a formula that treats  
all phases of the cough*

each 30 cc. (1 fl.oz.) of improved CALCIDRINE Syrup represents:

Dihydrocodeinone Bitartrate .....	10 mg. ( $\frac{1}{8}$ gr.)
Nembutal® Sodium .....	25 mg. ( $\frac{3}{8}$ gr.)
Ephedrine Hydrochloride .....	25 mg. ( $\frac{3}{8}$ gr.)
Calcium Iodide, anhydrous .....	910 mg. (14 grs.)

®Nembutal—Pentobarbital, ABBOTT

The iodide content has been doubled—more iodide than any other cough preparation. Dihydrocodeinone replaces codeine—to depress the cough reflex with greater efficiency and practically no nausea. And the new, nectar-like syrup quickly relieves irritated mucous membranes. All for prompt, more comprehensive cough therapy which all your patients will readily accept.

# DRINE®

Abbott

## MODERN THERAPEUTICS

—Continued from page 100a

mild diarrhea in seven individuals. The authors do not conclude that tetracycline cures acne, but it does entirely or partially control the pustular phases in most cases. Side-effects are negligible; resistant pustular lesions are infrequent, and long-term application appears safe.

### Neohydrin in the Treatment of Chronic Congestive Heart Failure

Neohydrin (chlormerodrin), an oral mercurial diuretic, has been studied in connection with its use in chronic congestive heart failure for periods ranging from eight to 65 months. Twenty-three patients were included in the study: ill-

nesses dated from seven months to 18 years. Arteriosclerotic heart disease was the most common entity, although rheumatic heart disease, hypertension and cor pulmonale were also represented. Neohydrin was administered in tablets containing the equivalent of 10 mg. of organic mercury, one to three tablets being the daily dosage. Criteria for effectiveness of the drug were maintenance of "dry weight," maintained reduction or absence of rales, peripheral edema and hepatomegaly. Particular attention was paid to the kidney, but in the series, no renal, gastrointestinal or other forms of toxicity were encountered. However, Neohydrin is definitely contraindicated in the presence of primary renal disease. Since all patients were in Class III to D

—Continued on page 106a

# DEPENDABLE

ON THOSE STORMY DAYS

## HVC

### HAYDEN'S VIBURNUM COMPOUND

ANTISPASMODIC and SEDATIVE

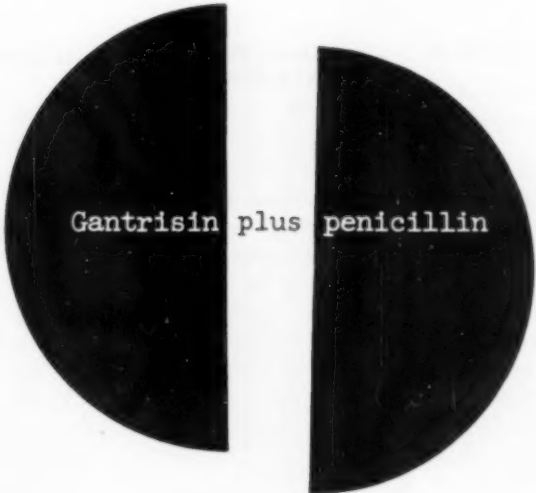
Generations of physicians have prescribed HVC for effective relief of smooth muscle spasm.

*Professional samples and descriptive literature available on request.*



**NEW YORK PHARMACEUTICAL CO.  
BEDFORD, MASS.**






Gantrisin plus penicillin

Gantricillin is Gantrisin plus penicillin in a single tablet. For severe infections, Gantricillin-300; for mild infections, Gantricillin (100); for pediatric infections, Gantricillin (acetyl)-200 suspension.

Gantricillin® Gantrisin® - brand of sulfisoxazole



in  
a single  
tablet

*Gantricillin*



roche

original research in medicine and chemistry

## MODERN THERAPEUTICS

—Continued from page 104a

of the American Heart Association, indicated medication was included in the regimen. Results were considered in two groups: 12 patients who had high non-protein nitrogen or albuminuria at the onset of treatment, and 11 without renal changes. In both groups, results were listed as good. The reduction of high nonprotein nitrogen levels to normal or near-normal after therapy indicated that the nitrogen retention was caused by the heart failure. The authors, G. C. Giffith and his associates of Los Angeles in *Annals of Internal Medicine* [45:7 (1956)], believe that their study has confirmed the efficacy of the drug. There was no clinical evidence of injury to the epithelium of the renal tubules.

## Stress Formula Vitamins Combined with Oxytetracycline

A combination of stress formula vitamins with oxytetracycline (Terramycin-SF) was administered to a series of 45 patients with various infections. The dosage employed was such that 1 Gm. of oxytetracycline was given daily along with the vitamin dosage suggested by the National Research Council.

Daskal reported in *Antibiot. Med. & Clin. Ther.* [3:33 (1956)], that the results were excellent in 43 of the patients. He stated that the response was more rapid and the general clinical condition of the patients was better than in similar conditions treated with the antibiotic alone. Other advantages of this combination were fewer and less severe side effects, shorter convalescent time, and an absence or minimal evi-

—Continued on page 108a

to prevent **anginal** attacks—  
*which will you prescribe next time?*



**4 hour protection**

or

**12 hour protection**

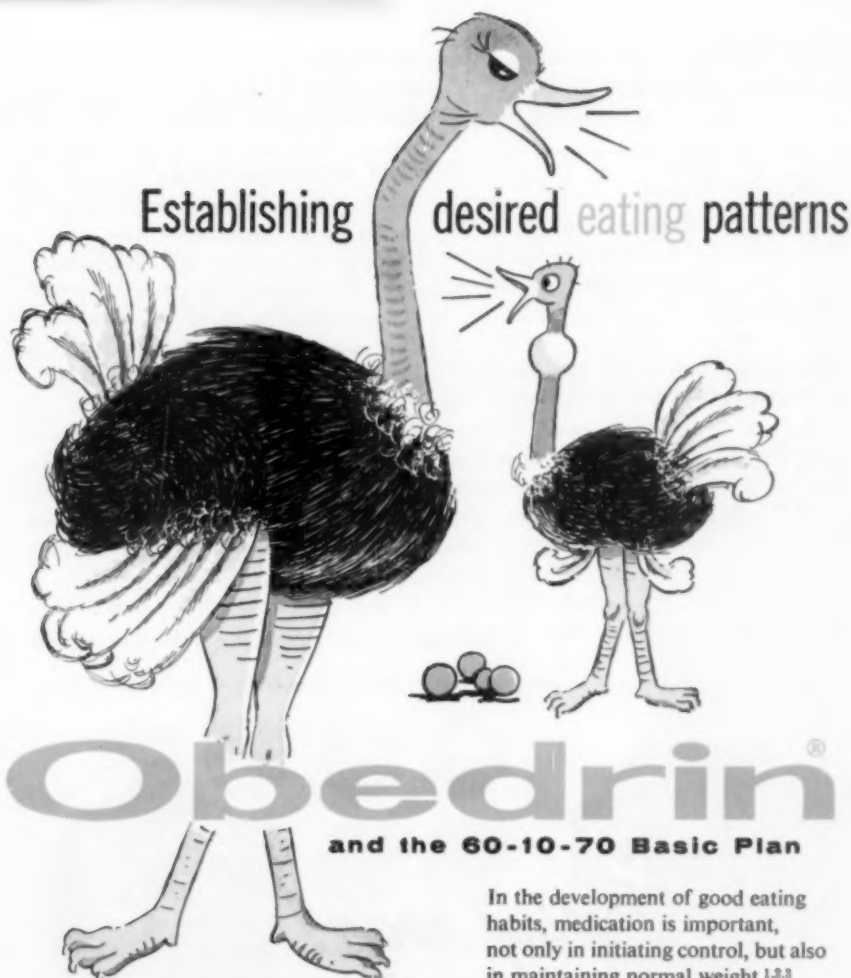
**PENTRITOL**  
**Tempules\***

\*Controlled disintegration capsules of 30 mg. pentaerythritol tetranitrate (PETN). Also available, Pentritol-B Tempules with 50 mg. butabarbital added.

One PENTRITOL Tempule every 12 hours ensures 24-hour protection from anginal attack in almost all patients. A 10 mg. release of PETN every four hours maintains continuous coronary vasodilatation, eliminating all dangerous medication gaps. Only PENTRITOL Tempules offer the protection of 24-hour uninterrupted prophylaxis.

Write for literature and samples.

The **Evron** Co., Chicago 13, Ill.



#### **Obedrin contains:**

- Methamphetamine for its anorexigenic and mood-lifting effects.
- Pentobarbital as a balancing agent, to guard against excitation.
- Vitamins B<sub>1</sub> and B<sub>2</sub> plus niacin to supplement the diet.
- Ascorbic acid to aid in the mobilization of tissue fluids.

Since Obedrin contains no artificial bulk, the hazards of impaction are avoided. The 60-10-70 Basic Plan provides for a balanced food intake, with sufficient protein and roughage.

Write for  
60-10-70 Menu pads, weight charts,  
and samples of Obedrin.

#### **Formula**

Semoxydrine HCl (Methamphetamine HCl) 5 mg.; Pentobarbital 20 mg.; Ascorbic acid 100 mg.; Thiamine HCl 0.5 mg.; Riboflavin 1 mg.; Niacin 5 mg.

1. Eisfelder, H.W.: *Am. Pract. & Dig. Treat.*, 5:778 (Oct.) 1954).

2. Sebrell, W.H., Jr.: *J.A.M.A.*, 152:42 (May, 1953).

3. Sherman, R.J.: *Medical Times*, 82:107 (Feb., 1954).

THE S. E. MASSENGILL COMPANY  
BRISTOL, TENNESSEE

## MODERN THERAPEUTICS

—Continued from page 106a

dence of the common companions of infectious febrile illnesses such as lassitude, irritability, anorexia, fatigability, and weakness.

### **Chlorpromazine in the Treatment of Mentally Retarded Children**

The use of chlorpromazine (Thorazine) has been reported in the literature from time to time in connection with mentally disturbed children. Esen and Durling *Archives of Pediatrics* [73:168 (1956)] studied the effects of the drug on 14 hyperactive, mentally deficient boys in the Wrentham State School,

Massachusetts; nine controls were in the same age group (eight to fourteen years). Binet intelligence quotients for all of the children ranged from 41 to 74. For administering the drug, the physically strong children were placed in one group, and the frail and younger boys in another. Children in the first group received 25 mg. of Thorazine daily which amount was doubled over a period of a week. Gradually the dose was brought to 25 mg. four times daily. To this amount, 10 mg. of Thorazine was added during the last two weeks of the second month. In the second group, the initial dose of 10 mg. twice daily was gradually increased to 10 mg. four times daily. Later the dose was increased to 25 mg. three times daily, and then to

—Continued on page 112a



*using soap!*

soap irritation can waste sound  
dermatologic therapy



LA-9

# LOWILA<sup>®</sup> cake

**cleanses tender skin gently . . . without soap irritation**

FOR: "TENDER" SKIN • "DERMATITIC" SKIN • "ALLERGIC" SKIN

**Try Lowila yourself, Doctor! Send for a full size cake today**

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# WHICH WOULD YOUR PATIENTS PREFER?

## 16

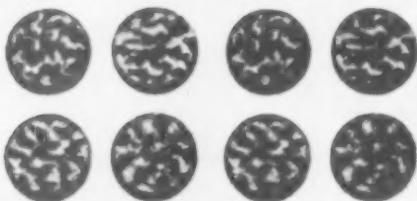
ONE-HALF GRAM ENTERIC-COATED  
AMMONIUM CHLORIDE TABLETS



or only 8

## AMCHLOR

ONE GRAM ENTERIC-COATED  
AMMONIUM CHLORIDE TABLETS (Brewer)



"Easy-to-swallow" AMCHLOR is processed in such a manner that each enteric-coated tablet contains 1 Gram of ammonium chloride and yet is not much larger than the 7½ gr. enteric-coated tablet. Thus the same dose can be given with only one-half the number of tablets.

FROM COAST TO COAST both physicians and patients are showing a decided preference for AMCHLOR.

The next time you prescribe ammonium chloride  
specify—

**AMCHLOR**—*Brewer*

THE ONE GRAM enteric-coated tablet  
of ammonium chloride  
for your patients' convenience!

For samples just send your Rx blank marked—11-AM-12

SUPPLIED

Bottles  
of  
100,  
300  
and  
1000



BREWER & COMPANY, INC. WORCESTER 8, MASSACHUSETTS U.S.A.



# ACHROMYCIN<sup>\*</sup>

Hydrochloride  
Tetracycline HCl Lederle

in the treatment of

## genitourinary infections

UROLOGISTS report the decided advantages of oral efficacy, minimal side effects, and wide range antibacterial activity offered by ACHROMYCIN in the treatment of urinary tract infections.

Finland's<sup>1</sup> group of patients with acute infections of the urinary tract (principally *E. coli*) demonstrated excellent response, both clinical and bacteriological, following administration of tetracycline.

Prigot and Marmell<sup>2</sup> reported 49 out of 50 patients with gonorrhea showed a negative smear and culture on the first post-treatment visit. Purulent discharge disappeared in these patients within 24 hours after a usual 1.5 Gm. dose of tetracycline.

Trafton and Lind<sup>3</sup> found tetracycline (ACHROMYCIN) an effective antibiotic for treating many urinary tract infections caused by both Gram-negative and Gram-positive organisms.

English, *et al.*<sup>4</sup> noted that a daily dose of 1 to 1.5 Gm. of tetracycline resulted in urinary levels as high as 1 mg. per milliliter.

To suit the needs of your practice and to further the patient's comfort ACHROMYCIN is offered in a complete line of 21 dosage forms.



LEDERLE LABORATORIES DIVISION  
AMERICAN CYANAMID COMPANY  
PEARL RIVER, NEW YORK



REG. U. S. PAT. OFF.

**References:**

1. Finland, M., *et al.*: *J.A.M.A.* 154:561 (Feb. 12) 1954.
2. Prigot, A. and Marmell, M. *Antibiotics and Chemotherapy* 4:1117 (Oct.) 1954.
3. Trafton, H. and Lind, H.: *idem* 4:697 (June) 1954.
4. English, A., *et al.*: *idem* 4:441 (April) 1954.

# NOW for PSORIASIS...



an  
outstanding  
clinically  
effective  
ORAL  
preparation

**LIPAN**

LIPAN  
therapy  
is based upon  
replacement  
of pancreatic  
insufficiency.



A recent Seminar at the New York Academy of Sciences emphasized the general acceptance by distinguished authorities of the hypothesis that psoriasis depends for its development upon a disturbance of fat metabolism.\*

Clinical evidence indicates psoriasis may be due to a disturbance of the lipid metabolism, evidently caused by a deficiency of pancreatic enzymes.\*

LIPAN Capsules have been shown to be clinically effective in 66.7% cases. This is well above the established minimum for all types of psoriatic therapy of 36.2%.

LIPAN — and nothing but LIPAN, as maintenance regimen may keep patients free of lesions.\*

\*References available.

LIPAN Capsules contain: Specially prepared, highly activated, desiccated and defatted whole Pancreatic Substance; Thiamin HCl, 1.5 mg.; Vitamin D, 500 I.U.

Available: Bottles 180's, 500's

COMPLETE LITERATURE AND REPRINTS  
UPON REQUEST, JUST SEND AN **8** BLANK.

**Spirit & Co., Inc.**  
WATERBURY, CONN.

## MODERN THERAPEUTICS

—Continued from page 108a

the same amount four times daily. The only side-effects encountered were slight drowsiness for a few days in three patients. Moderate hypersomnia was noticed in most of the children. According to the teachers' reports, moderate improvement in school work and in general behavior was shown by the majority of the children. The matrons noted improvement in five children in quieter and more cooperative behavior. Intelligence tests at the end of the Thorazine therapy showed a gain of 10.1 points; the controls averaged 7.6 points. These gains were probably due to greater emotional control. The hypothalamus plays an important role in emotional behavior, and Thorazine acts on the hypothalamic regulation of autonomic nervous system.

—Continued on page 114a

### Diagnosis, Please!

ANSWER

(from page 25a)

SPRUE

Note disordered motor function. Although it is difficult to pick sprue from among the many others the dual finding of dilatations high in the small bowel with gas is often very suggestive of sprue.

*Open the Flood Gates...*

*of  
the  
Biliary  
System  
with*



## **CHOLAN hmb**

*The most comprehensive biliary therapy available*

Formulated in a single tablet to provide SEDATION,  
synergistic with selective SPASMOLYSIS

plus potent HYDROCHOLERESIS

### **FORMULA:**

Dehydrocholic acid .....	250.0 mg.
Homatropine methylbromide.....	2.5 mg.
Phenobarbital .....	8.0 mg.

Average dose is one tablet 3 times daily.

**Maltbie**

Liberal Sample  
mailed on request

MALTBIE LABORATORIES DIVISION • Wallace & Tiernan Inc. • Belleville 9, N. J.

## MODERN THERAPEUTICS

—Continued from page 112a

### Bentyl Hydrochloride Affecting Intraluminal Pressures of the Stomach and Duodenum

A study was conducted in connection with 41 patients suffering from peptic ulcer, irritable colon and ulcerative colitis to investigate the effects of Bentyl hydrochloride on the motor activity of the stomach and duodenum as measured by changes in intraluminal pressure. Prior to the tests, no food was taken for ten hours, and motor activity was recorded for a minimum of 30 minutes. Good motor activity was noted in all patients. Tube positions were checked at frequent intervals by fluoroscope, and location of the tube tips was noted at the end of the experiments.

Lorber and Shay who conducted the investigation, *Gastroenterology* [28:274 (1955)] found that the subcutaneous administration of the drug in doses from 5 to 40 mg. failed to abolish wave activity. Higher doses depressed large waves in some patients. The intramuscular administration of Bentyl hydrochloride in doses from 5 to 200 mg. produced little or no effect in small amounts. Large waves, however, were depressed or abolished when higher doses were used. The majority of the patients required 25 to 37.5 mg. of the drug taken three times daily to obtain relief of symptoms.

### The Ophthalmic Use of Tizine

Hyperemia of the palpebral and bulbar conjunctiva is frequently made worse by rubbing the eyes thereby creating a vicious cycle requiring relief by

—Continued on page 117a

## EXPASMUS RELIEVES TENSION

Expasmus® provides safe, effective, *clinically evaluated* therapy without the disadvantages of belladonna, the barbiturates or amphetamine.

Expasmus relieves the tension associated with muscle spasm, pre-menstrual and anxiety states . . . relieves pain and muscle spasm in arthritic and rheumatic conditions . . . relieves low back pain.

Average dose: two tablets every four hours; in resistant cases, three tablets four times a day.

On prescription only, samples on request.

### MARTIN H. SMITH COMPANY

131 East 23rd Street, New York 10, N. Y.

Manufacturers of ethical products for over half a century.







**W**HEN the Viso is taken from its shipping carton, *quality of appearance* is immediately apparent. The attractive mahogany case and black and gold control panel blend into a handsome appearance which, in itself, is actually an operating advantage, since it helps to reduce apprehensiveness in "new" ECG patients.

The first days of your use of the Viso clearly reveal its simple, quickly learned operation.

And, as the days of the "trial period" go by, other features of this instrument become obvious: freedom from "AC" interference, complete stability of operation, "rugged" nature of Viso construction, easy portability of the instrument.

In reviewing the many advantages of Viso ownership, a thought about future service and supplies may occur to you. For Sanborn owners, service is typified in the informative, bi-monthly Technical Bulletin sent free of charge to all Sanborn owners . . . by capably staffed Branch Offices and Service Agencies in 42 cities throughout the country . . . and by Sanborn's reputation as a manufacturer of precision medical diagnostic instruments since 1917.

**15 DAYS\* WILL  
PROVE THE  
VISO-CARDIETTE'S  
VALUE IN  
YOUR  
PRACTICE**



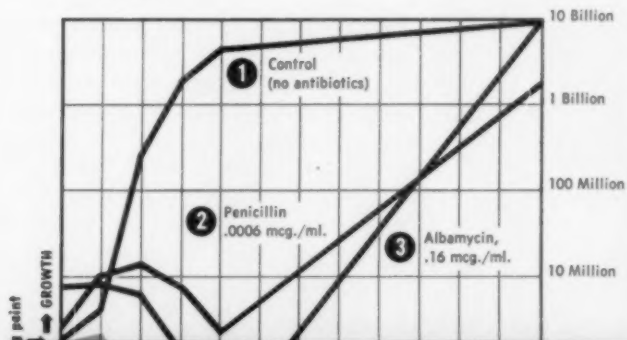
\*Sanborn Company offers you a Viso-Cardiometer to use in your own practice for 15 days — without cost or obligation — to let your own experience decide IF an ECG would be useful to you, and if so, WHICH one.

**SANBORN COMPANY**  
WALTHAM 54, MASSACHUSETTS

## Antibiotic Synergism

This graph shows the growth rate of a penicillin-sensitive strain of *Staphylococcus* (*Micrococcus pyogenes*, var. *aureus*) under 3 conditions:

1. In the absence of antibiotics
2. In the presence of subinhibitory concentration of penicillin
3. In the presence of subinhibitory concentration of Albamycin\*



**Now lift this transparency** and see what happens when half these amounts of penicillin and Albamycin are combined!

**Upjohn**

\*Trademark, Reg. U.S. Pat. Off.—The Upjohn brand of crystalline novobiocin sodium.  
Data: Upjohn Research Laboratories (3265—ARB—119)

New

average dosage only t.i.d.

# Alba-Penicillin\*

(Albamycin plus penicillin)

**Compare it with the antibiotic you are currently using:**

**Range of effectiveness:** Alba-Penicillin is effective against the organisms that cause the overwhelming majority of bacterial infections (Staphylococci, Streptococci, Pneumococci, Proteus).

**Risk of resistance:** Because in vitro tests show this combination is synergistic against even Staphylococci **already** resistant to all other antibiotics, the risk of resistance is minimized.

**Risk of enterocolitis:** Because it has little or no effect on the predominant Gram-negative intestinal bacteria, and is highly effective against Staphylococci, there is virtually no danger of enterocolitis due to alteration in intestinal flora, or of other side effects such as perianal pruritus.

**Convenience:** Alba-Penicillin is oral therapy, and the average adult dosage is only **1 to 2 capsules t.i.d.**, which eliminates middle-of-the-night medication.

It is available in bottles of 16 capsules. Each capsule contains 250 mg. Albamycin (as novobiocin sodium, crystalline) and 250,000 units penicillin G potassium.

**Upjohn**

**The Upjohn Company • Kalamazoo, Michigan**

\*Trademark

## MODERN THERAPEUTICS

—Continued from page 114a

means of a topically applied decongestant which will act as a vasoconstrictor. Since the sympathomimetic agent, Tyzine, had received very favorable mention as a nasal decongestant, the authors, E. E. Grossmann and R. H. Lehman of the Marquette University School of Medicine, *American Journal of Ophthalmology* [42:121 (1956)], report on its ophthalmic use in connection with 156 patients in whom conjunctival hyperemia was due to chemical and physical trauma, blepharitis, actinic conjunctivitis, thyrotropic exophthalmos, recurrent chalazia, and keratitis. Involvement ranged from mild injection to severe congestion and inflammation. At first, Tyzine was used in a 0.1 per cent concentration with a pH between 5.5 and 6.5. The dosage was two drops

three times a day. Results were carefully recorded. Later, a 0.05 per cent solution was used, and found to be equally effective. Good to excellent therapeutic effects were noted in all patients.

There was an absence of rebound vasodilatation. Tyzine, appears to be an excellent ophthalmic decongestant that affords immediate relief without toxic manifestations.

### A New Steroid Anesthetic

A preliminary communication on the characteristics of the new steroid anesthetic, 21-hydroxypregnane-3:20-dione sodium succinate (Viadril), was presented by Lerman in *Brit. Med. J.* [4985: 129 (1956)]. A series of 19 cases were given the new drug. The dosage employed ranged from 500 to 1250 mg. The author reported that the induction of anesthesia strikingly resembled the

—Continued on page 125a

**"Combinations...  
produce fewer side effects..."**

Waldron, J.M., et al.: *Am. J. M. Sc.* 230:551 (November) 1955.

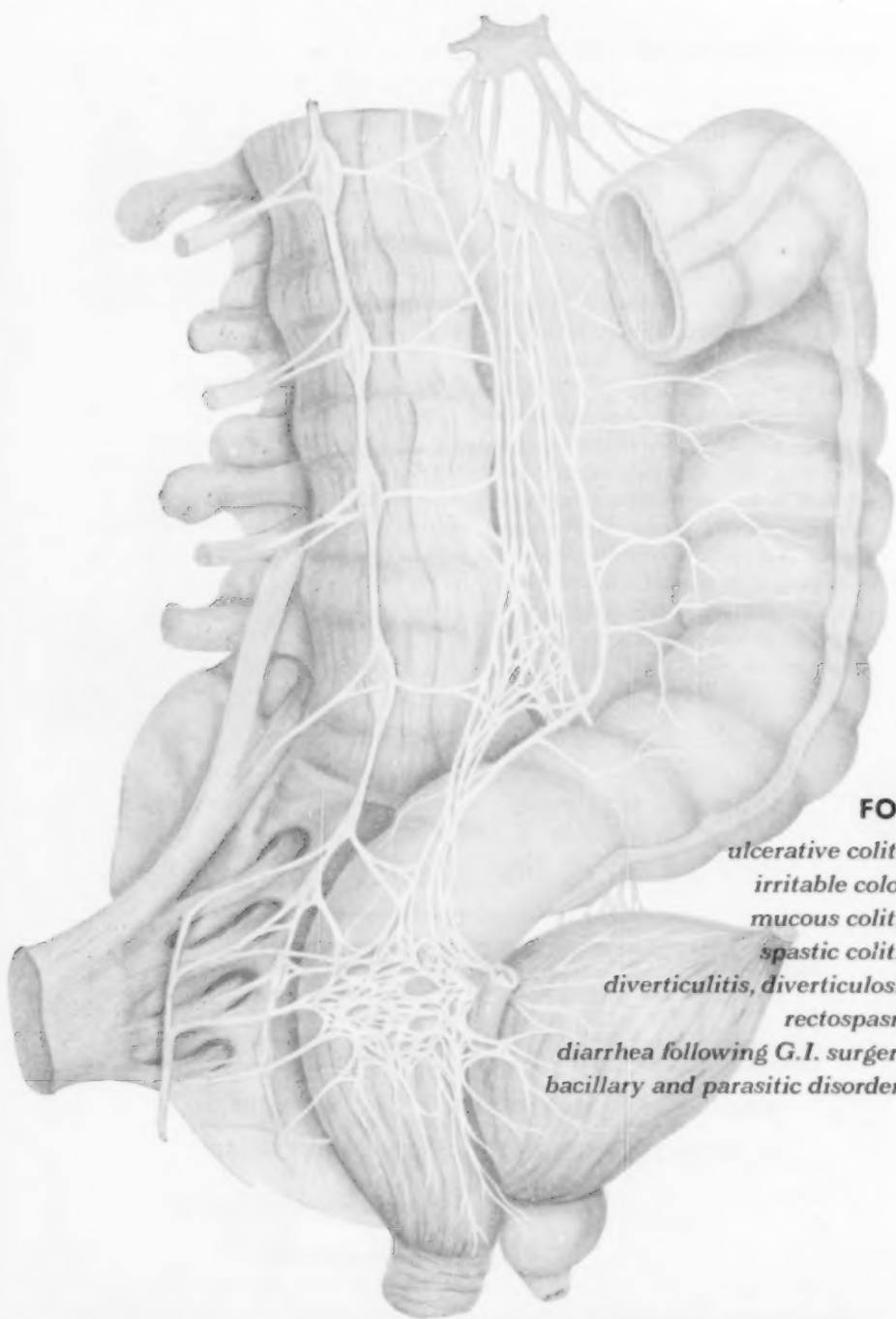
# MIO-PRESSIN<sup>\*</sup>

rauwolfia      protoveratrine      Dibenzylin†  
for moderately severe to severe hypertension

Smith, Kline & French Laboratories, Philadelphia

<sup>\*</sup>T.M. Reg. U.S. Pat. Off.

<sup>†</sup>T.M. Reg. U.S. Pat. Off. for phenylbenzamine hydrochloride, S.K.F.



**FOR** 

*ulcerative colitis*  
*irritable colon*  
*mucous colitis*  
*spastic colitis*  
*diverticulitis, diverticulosis*  
*rectospasm*  
*diarrhea following G.I. surgery*  
*bacillary and parasitic disorders*

*For more detailed information, request Brochure No. NDA 16,  
Lakeside Laboratories, Milwaukee 1, Wisconsin.*

announcing

# Cantil

## for the colon

### EFFECTIVE

relieves pain, cramps, bloating  
curbs diarrhea  
helps restore normal tone and motility

### SELECTIVE

avoids widespread autonomic disturbance  
unusually free of "antispasmodic" side effects  
avoids urinary retention

### HOW CANTIL BENEFITS COLON PATIENTS

CANTIL has a markedly selective anticholinergic action on the colon with little or no effect on stomach, small intestine and bladder.

In clinical studies 3 out of 4 patients obtained relief of symptoms and less than 10 per cent had any significant side effects.

### HOW CANTIL IS PRESCRIBED

One or two tablets three times a day preferably with meals and one or two tablets at bedtime.

### CANTIL—TWO FORMS

CANTIL (plain) — 25 mg. of CANTIL in each scored tablet — bottles of 100.

CANTIL with Phenobarbital — 25 mg. of CANTIL and 16 mg. of phenobarbital (Warning: May be habit forming.) in each scored tablet — bottles of 100.

CANTIL is the only brand of N-methyl-3-piperidyl-diphenylglycolate methobromide.



LAKESIDE

# New unsurpassed

superior  
specific  
'dermacoid'

# MA

*ethamicort*

+ NEOMYCIN FOR

# NEO-MA

*neomycin and ethamicort*

R<sub>x</sub>

Reserved  
for topical use  
for Rx only

MAGNACORT is a *dermacoid*—a unique, new steroid highly active in topical use only and therefore reserved specifically for topical therapy.

NEO-MAGNACORT ideally unites the new *dermacoid* with an outstanding topical antibiotic, neomycin, for unsurpassed dual anti-inflammatory, anti-infective therapy.

## EFFECTIVENESS

MAGNACORT is several times more potent topically than hydrocortisone and effects marked dermal diffusion and penetration.

MAGNACORT provides remarkably rapid, dependable and frequently superior suppression of itching, edema, swelling, oozing and other symptoms of a variety of inflammatory dermatoses—with only 1/2 of 1% concentration. It can be effective where other topicals are unsatisfactory or inadequate.

NEO-MAGNACORT extends the same therapeutic advantages, along with those of neomycin, for therapy of primary skin infections or dermatitis complicated or threatened by infection.

dermatologic corticoid

**GNACORT**\*

TOPICAL OINTMENT

INFECTION

**GNACORT**\*

TOPICAL OINTMENT

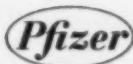
## SAFETY

MAGNACORT and NEO-MAGNACORT are apparently free of any risk of systemic reactions. Extensive initial and continuing clinical investigations report no evidence of systemic effects.

**Supplied:** MAGNACORT Topical Ointment, in 1/2-oz. and 1/6-oz. tubes, 0.5%. NEO-MAGNACORT Topical Ointment, in 1/2-oz. and 1/6-oz. tubes, containing 0.5% neomycin sulfate and 0.5% ethamicort (MAGNACORT).

## EXCELLENT TOLERATION

Clinical trials also reveal that MAGNACORT and NEO-MAGNACORT are virtually non-sensitizing and rarely produce other undesirable local effects. No instances of rebound dermatitis have been reported.



**PFIZER LABORATORIES**  
Division, Chas. Pfizer & Co., Inc.  
Brooklyn 6, New York

\*trademark

## criteria for skeletal muscle relaxant

"The need for a therapeutic agent that would provide prolonged relaxation of spastic or rigid muscles is generally recognized. To date, there has been no available drug proved sufficiently safe, effective, or long-lasting to justify its general use."

*Before Flexin*

# NOW

# flexin\*

(Zoxazolamine,† McNeil)

## fulfills these

**supplied:** 250 mg. yellow, scored tablets, bottles of 50.

(1) Abrahamson, E. H., and Seid, H. W., III: J.A.M.A. 160:749 (Mar. 3) 1956.

(2) Amols, W.: J.A.M.A. 160:742 (Mar. 3) 1956.

(3) Rodriguez-Gomez, M., Valdes-Rodriguez, A., and Drew, A. L.: J.A.M.A. 160:752 (Mar. 3) 1956.

(4) Smith, R. T., Kron, K. M., Peak, W. P., and Hermann, I. F.: J.A.M.A. 160:745 (Mar. 3) 1956.

\*T.M.

†U. S. Patent Pending

### **FLEXIN is sufficiently safe**

"No significant alterations of pulse, blood pressure, or respiration were observed [during therapy with FLEXIN], and there were no deleterious effects noted in blood counts, urinalyses, or liver and kidney function tests."<sup>2</sup>

"...no important signs of toxicity were found in blood or urine studies...drowsiness and transient dizziness in an occasional patient, together with occasional mild gastric irritation, were the only undesirable side-effects observed..."<sup>3</sup>

### **FLEXIN is effective**

"When it [FLEXIN] was administered orally in doses of 250 to 500 mg. three and four times a day, 14 of 18 patients with spasticity due to spinal cord lesions showed objective improvement of spasticity."<sup>3</sup>

"Rheumatic diseases with the major disability caused by stiffness and aching appear to respond well..."<sup>4</sup>

### **FLEXIN has a long duration of action**

"The administration of an effective dose of zoxazolamine [FLEXIN] was usually followed by muscular relaxation within an hour, with the peak effect being reached within two hours and waning within four hours. Some degree of muscular relaxation was occasionally seen 24 hours or longer after discontinuance of therapy."<sup>1</sup>

## **requirements**

McNEIL LABORATORIES, INC. - PHILADELPHIA 32, PA.

**McNEIL**



Give your patient that extra lift with "Beminal" 817

## MODERN THERAPEUTICS

—Continued from page 117a

coming of ordinary sleep. Deeper anesthesia was obtained by means of a mixture of 3 parts nitrous oxide and 1 part oxygen. Preanesthetic medication was employed in most cases and muscle relaxants in some. The relaxation obtained with the steroid alone was good but not comparable with that obtained with the muscle relaxants. Bleeding was usually much reduced. Subsequent to the operation, the patient was usually awake and free from pain within an hour. Vomiting occurred in only one case and hormonal effects were absent.

### The Disposition of Dextran Following Intravenous Injection

Studies using rabbits and human subjects showed that dextran remained primarily in the blood plasma. Very little was found in the cells. According to Bloom, writing in *J. Lab. Clin. Med.* [47:938 (1956)], it was not possible to detect an increase in reducing substances, indicating degradation products of dextran, in the plasma or urine of human subjects.

Following the intravenous injection of 30 Gm. of dextran in 19 subjects, the majority of the excretable material was found in the urine during the first 24 hours. A total of 42 per cent was excreted over 5 days. Following 60 Gm., a similar picture was found except that about 48.6 per cent was excreted. It was felt that the excretable portion was probably fractions of smaller molecular weight. The remaining fractions disappeared at a slow rate indicating a

—Continued on page 126a

(Vol. 84, No. 12) December 1956



Give your patient that extra lift with "Beminal" 817 when high vitamin B and C levels are required.

"Beminal" 817—each capsule contains:

Thiamine mononitrate (B <sub>1</sub> )	25.0 mg.
Riboflavin (B <sub>2</sub> )	12.5 mg.
Nicotinamide	75.0 mg.
Pyridoxine HCl (B <sub>6</sub> )	3.0 mg.
Calc. pantothenate	10.0 mg.
Vitamin C (ascorbic acid)	150.0 mg.
Vitamin B <sub>12</sub> with intrinsic factor concentrate	1/9 U.S.P. Unit

New improved formula



Dosage: 1 to 3 capsules daily, or more, depending upon the needs of the patient.

Supplied: Bottles of 100 and 1,000 capsules.



AYERST LABORATORIES

New York, N. Y. • Montreal, Canada 5669

125a

## MODERN THERAPEUTICS

—Continued from page 125a

rate limitation in metabolism, excretion, or removed by cells. This data indicated that the persistence of dextran in the plasma is for sufficient time to provide efficacy as a plasma volume expander.

### **An Evaluation of Steroid Preparations in Skin Eruptions by Topical Application**

An evaluative study involving about 4000 patients was undertaken by Robinson *et al* and reported in *U.S.A.F. Med. J.* [7:963 (1956)]. The study undertook to determine and compare the value of available steroid preparations when applied topically in the treatment of various dermatoses.

A series of bases were used. Oily base ointments, greaseless base creams, and lotions were effective vehicles when selected properly for the steroid employed. Treatment was usually begun with a steroid preparation of proven value, such as 1 per cent hydrocortisone, with a subsequent substitution of a placebo or one of the newer compounds without the knowledge of the patient or physician.

The authors reported that hydrocortisone free alcohol and hydrocortisone acetate were effective in the treatment of responsive dermatoses when applied in a 1 per cent concentration. Hydrocortisone hemisuccinate and hydrocortisone diethylaminoacetate hydrochloride were equally effective in concentrations of 0.5 per cent. Fludrocortisone acetate was effective in a concentration of 0.1



**NEW!**

*Abbott's Ready-Mixed*

# Compo

*the higher blood levels of penicillin V*

per cent or greater. 9-alpha fluorohydrocortisone tertiary butylacetate was also effective in a concentration of 0.5 per cent.

Prednisolone and prednisolone succinate were relatively ineffective and produced a high incidence of primary irritation upon application. However, a new, highly purified prednisolone was found to be effective in a concentration of 0.5 per cent with no primary irritation. Also investigated was a series of new complex chemical steroids called "allo compounds." These proved to be too irritating for effective therapy.

Various combinations of the steroids were also studied. Combinations of hydrocortisone, hydrocortisone acetate, fludrocortisone acetate and prednisolone with antibiotics were found to be effective in the treatment of responsive der-

matoses complicated by secondary, pyogenic infection. The antibiotic was not found to inhibit the action of the steroid and vice versa. Combinations with Caligesic Lotion proved to be too irritating to be of value. Hydrocortisone with Prantal Cream was of value in the treatment of uncomplicated intertrigo. Lichenified dermatitis responded to combinations of fludrocortisone and hydrocortisone with coal tar.

Topical steroid therapy was found to be of definite value in the treatment of erythema solare, atopic dermatitis, dermatitis venenata, seborrheic dermatitis, intertrigo, pruritus ani, pruritus vulvae, lichen simplex chronicus, eczematous eruption of the hands, nummular eczema, stasis dermatitis, and eczematized epidermophytosis. The authors

—Continued on page 136a

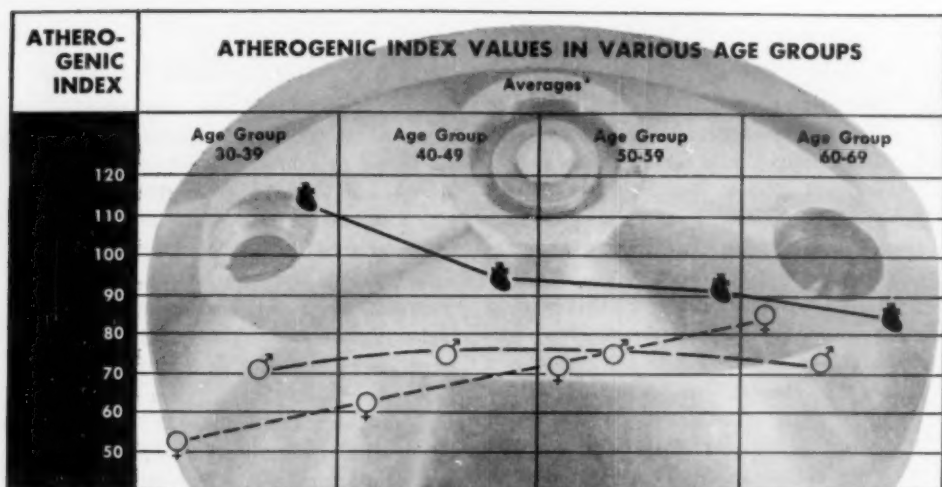
*Penicillin V Suspension*

**cillin**  
(Hydrabamine Penicillin V)



*...in a delicious, banana-flavored form*

Abbott



\*Averages derived from the following number of individuals in each group.

♀ Normal females:	188	140	80	9
♂ Normal males:	284	473	267	74
♂ Males with coronary heart disease:	9	91	148	61

Adapted from Gofman, J. W., and others; *Mod. Med.* 27:119 (June 15) 1953.



## HOW A DIZZY SPIN SPILLS THE FACTS *about coronary disease and atherosclerosis*

Here's research in grand style at the terrific speed of 60,000 RPM, with centrifugal fields reaching 300,000 g's in the ultracentrifuge!

**The object:** identification and quantitation of the giant molecules among the complex lipoproteins of the blood.

**Significance:** elevation of certain blood lipids has been linked to the accelerated progression of coronary disease; disturbed lipid metabolism is suspected as a cause of atherosclerosis. Blood fractionation by ultracentrifuge has led to the development of atherogenic index values shown above: clinical atherogenic trends coincide with the atherogenic index obtained by this method.

**Application:** the ultracentrifuge is now being used to investigate the influence of dietary supplementation with "RG" Lecithin upon atherogenic index values in patients.

This is but one phase of the vast research on disease states which apparently are associated with lecithin insufficiencies. Lecithin, a constituent of all cells and organs, emulsifier, and lipid transport agent, is the focal point of attention.

**Glidden's "RG" Lecithin** is the only lecithin made specifically for medically indicated dietary purposes. It consists of 90% natural phosphatides in dry, free-flowing granules refined from soybeans.

"RG" Lecithin is well tolerated and readily utilized by the body. *There are no contraindications.* It is usually given in amounts of one teaspoonful t.i.d. (7.5 Gm.). (In current clinical research, amounts up to 60 Gm. daily are used.)

A preliminary report on lecithin in health and disease has been published and is available to physicians on request.

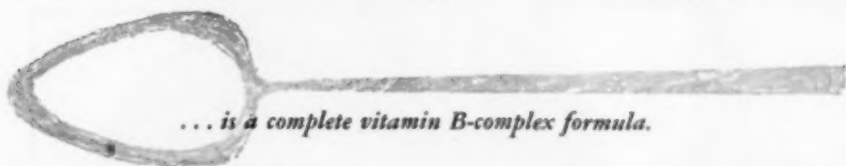


# RG® LECITHIN

A dietary phosphatide supplement.

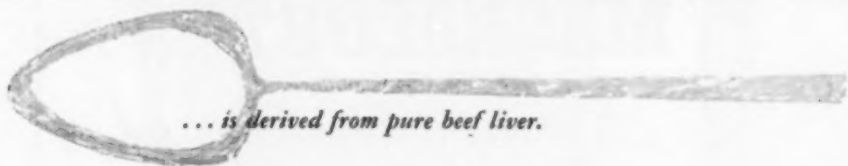
The Glidden Company • Chemurgy Div., 1825 N. Laramie Ave., Chicago 39, Ill.

# LEDERPLEX LIQUID



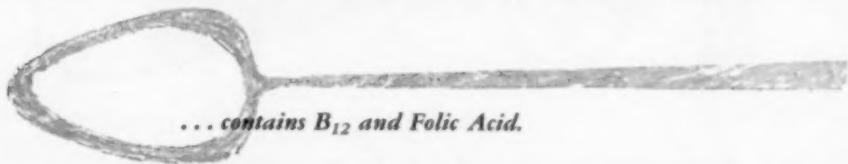
*... is a complete vitamin B-complex formula.*

# LEDERPLEX LIQUID



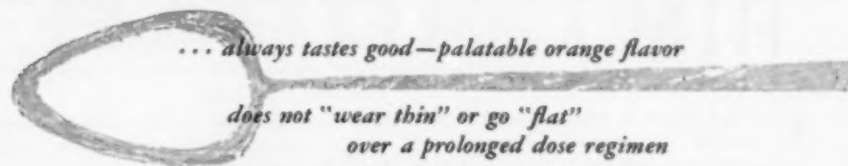
*... is derived from pure beef liver.*

# LEDERPLEX LIQUID



*... contains B<sub>12</sub> and Folic Acid.*

# LEDERPLEX LIQUID



*... always tastes good—palatable orange flavor*

*does not "wear thin" or go "flat"  
over a prolonged dose regimen*

## LEDERPLEX\*

Vitamin B-Complex *Liquid* LEDERLE

*Each teaspoonful (5 cc.) contains:*

Thiamine HCl (B <sub>1</sub> )	2 mg.	Pantothenic Acid	2 mg.
Riboflavin (B <sub>2</sub> )	2 mg.	Choline	20 mg.
Niacinamide	10 mg.	Inositol	10 mg.
Folic Acid	0.2 mg.	Soluble Liver Fraction	470 mg.
Pyridoxine HCl (B <sub>6</sub> )	0.2 mg.	Vitamin B <sub>12</sub>	5 mcgm.

*Also offered in Tablet, Capsule and Parenteral forms.*

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK  
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PATIENT: *Robert Baker*

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**MAGNACORT\*** *3 ps*  
ethamicort

*Sig. apply locally b.i.d.*




M. D.  
\*trademark

AVOID  
RE-INFECTION FROM  
**HIM** IN  
VAGINAL  
TRICHOMONIASIS



**K**ARNAKY reports in treating vaginal trichomoniasis "...approximately 39 to 47 percent of the resistant cases are re-infections from the sexual partner."<sup>1</sup>

*Symptom-free carriers.* Most infected husbands of infected wives are asymptomatic. They are "...none the less a potential source of re-infection in wives successfully treated."<sup>2</sup>

*Protect the wife.* Karnaky recommends in recurrent cases of vaginal trichomoniasis that the husband wear a condom at coitus for as long as four to nine months. By the end of this time the trichomonads he harbors will usually die out.<sup>3</sup>

*Prescribe high quality condoms.* Take advantage of Schmid product improvements to win cooperation of the husband. According to the preferences and problems of your patient,

prescribe Schmid condoms by name.

XXXX (FOUREX)<sup>®</sup> skins are made from the cecum of the lamb and are pre-moistened. They feel like the patient's own skin and do not dull sensory effect. RAMSES<sup>®</sup> natural gum rubber condoms are different — transparent, tissue-thin, yet strong.

Your prescription of Schmid condoms circumvents embarrassment, assures fine quality, provides essential protection.

*Treat the wife.* The Davis technique<sup>4</sup> with VAGISEC<sup>®</sup> liquid shows better than 90 per cent success in clinical data obtained by more than 150 physicians.<sup>4</sup> Unusual three-way attack with VAGISEC (originally "Carlendacide") actually explodes trichomonads. Liquid and jelly.

### JULIUS SCHMID, INC.

*prophylactics division*

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References: 1. Karnaky, K. J.: Urol. & Cutan. Rev. 48:812 (Nov.) 1938. 2. Lanceley, F., and McEntegart, M. G.: Lancet 1:668 (Apr. 14) 1953. 3. Karnaky, K. J.: J.A.M.A. 155:876 (June 26) 1954. 4. Davis, C. H.: West. J. Surg. 63:53 (Feb.) 1955.



for tranquilization without lethargy

for gradual, sustained fall in blood pressure\*

# RAUDIXIN

Squibb Whole Root Rauwolfia Serpentina

*wide safety margin<sup>1</sup>*

- Raudixin is not habit-forming.
- Tolerance has not been reported.<sup>2</sup>
- There is little danger if accidental or intentional overdosage should occur.
- Does not cause liver dysfunction.
- Serial blood counts not necessary during maintenance therapy.
- Less likely than reserpine to produce depression.<sup>3</sup>

**DOSAGE:** 200 mg. daily initially; may be adjusted within range of 50 to 500 mg. per day in single or divided doses. Most patients can be maintained on 100 to 200 mg. daily.

**SUPPLY:** 50 mg. and 100 mg. tablets, bottles of 100, 1000 and 5000.

\*NOTE: The hypotensive activity of Raudixin is specific for the hypertensive state. Raudixin does not significantly affect the blood pressure of the normotensive patient.

References: 1. Galambos, A.: *Angiology* 5:449 (Oct.) 1954; 2. Lenke, C.D.: *Ohio State M.J.* 52:369 (April) 1956; 3. Moyer, J.H. et al.: *A.M.A. Arch. Int. Med.* 96:530 (Oct.) 1955.

SQUIBB



Squibb Quality—the Priceless Ingredient

# OVARIAN DECLINE DEPRIVES BODY OF IMPORTANT METABOLIC REGULATOR

## Estrogen Deficiency Often Provokes Misleading Symptoms

■ Estrogen is intrinsically involved in numerous biologic functions; directly it affects the sex-linked organs and, indirectly, influences general body metabolism. As a result, reduced estrogen levels before, during, and after the menopause may provoke a variety of symptoms suggesting disorders of organic, metabolic or psychogenic origin. Replacement therapy with the complete equine estrogen-complex provides prompt relief of physical distress and a gratifying "sense of well-being."

There is a growing realization that the function of the ovary is not concerned only with the sexual and reproductive life of the individual but also with metabolic regulation.<sup>1</sup> The influence of estrogen upon carbohydrate metabolism,<sup>2,3</sup> its marked effect on the concentration and distribution of serum lipids,<sup>4-6</sup> and its osteoblastic stimulating properties in bone formation<sup>7</sup> are well documented in the literature. Clinical statistics show that coronary atherosclerosis is 10 to 40 times higher in men under 40 than in women of the same age; that, furthermore, the degree of arteriosclerosis is much greater in women who have undergone bilateral oophorectomy than in control women.<sup>1</sup> Additional evidence of metabolic changes due to estrogen deprivation is the high incidence of osteoporosis in women past the menopause.<sup>8</sup>

Because of the vast metabolic influence normally exerted by estrogen during the reproductive years, declining ovarian function often provokes a variety of symptoms which are not as easily recognized as the "hot flushes" but which, nonetheless, are manifestations of estrogen deficiency. Tachycardia, dyspnea and palpitations have been observed in

nearly 70 per cent of cases, and a symptomatic triad of cold extremities, numbness, and tingling in over 48 per cent.<sup>9</sup> Symptoms involving the musculoskeletal system simulating arthritic conditions are not infrequent<sup>9-12</sup> and manifestations of nervous or emotional character are present in the majority of patients.<sup>9</sup>

A realistic approach to treatment is replacement therapy with estrogen. As Hamblen<sup>13</sup> points out, "... estrogens afford specific treatment and should not be denied the patient."

Fifteen years of clinical acceptance support the use of "PREMARIN" as a highly effective and notably safe natural, oral estrogen. "PREMARIN" produces prompt relief of distressing symptoms and, in addition, provides "... a striking improvement in the sense of well-being..."<sup>14</sup>

"PREMARIN" contains all the naturally occurring components of the equine estrogen-complex in the form of water-soluble conjugates. The potency of "PREMARIN" is declared in milligrams of conjugated estrogens (equine) expressed as sodium estrone sulfate.

**Recommended Dosage:** "PREMARIN," 1.25 mg. daily, is given initially. After four or five days, if the response is not sufficient the dosage is increased to 2.5 and up to 3.75 mg. daily in divided doses. When symptoms are under control, the dosage may be gradually reduced to a maintenance level of 0.625 mg. daily or less. "PREMARIN" is given in approximately 21 day courses with rest periods of five to seven days between courses.

Bibliography available on request.

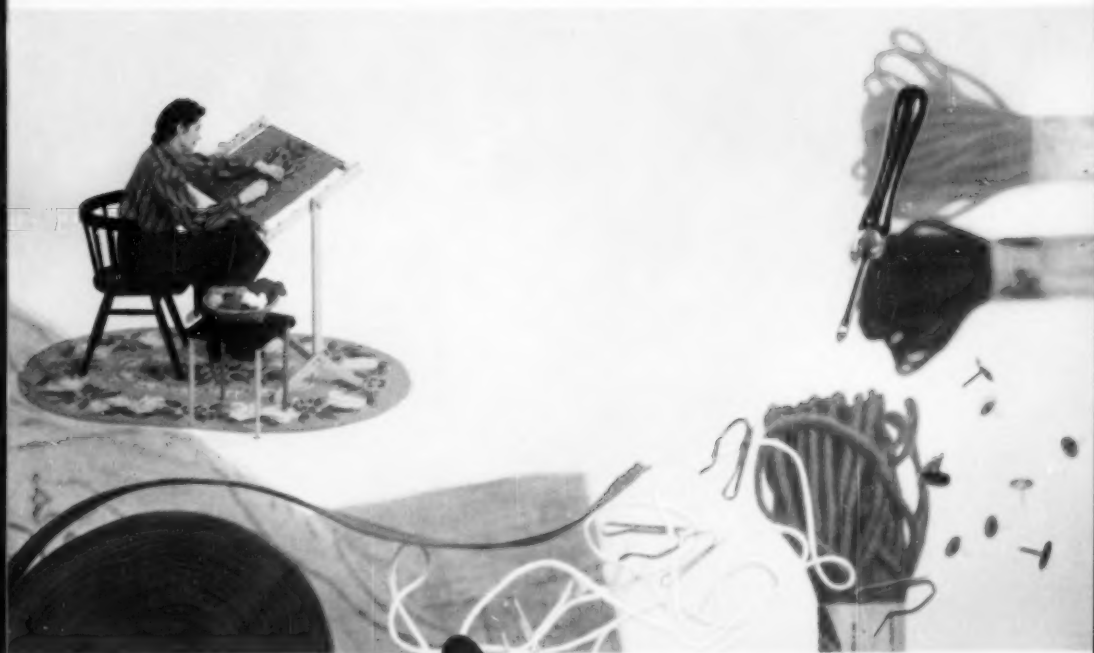
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**EVERY WOMAN WHO SUFFERS IN THE MENOPAUSE  
DESERVES "PREMARIN,"**

*natural oral estrogen presenting  
the complete equine estrogen-complex*

"Premarin" therapy imparts a "sense of well-being" to the patient in the menopause and pre- and postmenopausal syndrome. It promotes renewed interest in daily activities and a brighter mental outlook.



Purple Tablets 2.5 mg.,  
20's, 100's and 1,000's

Yellow Tablets 1.25 mg.,  
100's and 1,000's

Red Tablets 0.625 mg.,  
100's and 1,000's


Green Tablets 0.3 mg.,  
100's and 1,000's

Liquid 0.625 mg. per 4 cc. (tsp.),  
120 cc. (4 fl. oz.) bottles

Symptomatic relief from distressing symptoms of the menopause is promptly obtained with "Premarin." A "sense of well-being" is another gratifying benefit of therapy. Average dosage, 1 to 3 tablets (1.25 to 3.75 mg.) daily, in 21 day courses with a rest period of one week. See facing page for complete details.

"Premarin" presents the complete equine estrogen-complex. Has no odor—imparts no odor.

**"PREMARIN"** <sup>®</sup> Conjugated estrogens (equine)  
in the menopause and  
pre- and postmenopausal syndrome

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announcing Hesper-C Prenatal,  
the *only complete* preparation  
with hesperidin and ascorbic  
acid as capillary-protective  
factors plus conventional  
prenatal vitamin and mineral  
supplementation—

*a precaution*  
in normal pregnancy,\*  
*a necessity*  
in habitual abortion

\*It is estimated that 10% to 20% of all pregnancies end in spontaneous abortion. In a high percentage of these patients, there is objective evidence of increased capillary fragility.<sup>1,2</sup> The capillary-protective factors in Hesper-C Prenatal *restore and maintain* capillary integrity<sup>3,4</sup> . . . increase the number of live births.

Each capsule contains:

Hesperidin Complex	100 mg.
Ascorbic Acid	100 mg.
Vitamin A Acetate	1000 USP units
Vitamin D <sub>2</sub>	200 USP units
Thiamine Mononitrate	1.25 mg.
Riboflavin	0.75 mg.
Nicotinamide	5.0 mg.
Vitamin B <sub>12</sub>	0.75 micrograms
Folic Acid	0.05 mg.
Pyridoxine Hydrochloride (B <sub>6</sub> )	1.67 mg.
Calcium Pantothenate	1.0 mg.
Ferrous Gluconate (2.5 mg. iron)	21.6 mg.
Calcium Carbonate (83.3 mg. calcium)	208.25 mg.
Copper Sulfate (0.5 mg. copper)	2.0 mg.
Potassium Iodide (0.05 mg. iodine)	0.065 mg.

In bottles of 100 and 500 capsules.

**Recommended daily dose:**  
Two capsules t.i.d.

**References:** 1. Greenblatt, R. B.: *Obst. & Gynec.* 2:530, 1953.  
2. Javert, C. T.: *Ann. New York Acad. Sc.* 61:700, 1955.  
3. Barishaw, S. B.: *Exp. Med. Surg.* 7:358, 1949.  
4. Selsman, G. J. V. & Horoschak, S.: *Am. J. Dig. Dis.* 17:92, 1950.

Products of Original Research



THE NATIONAL DRUG COMPANY  
Philadelphia 44, Pa.

# HOW OLD IS OLD ?

*"The really old people are those 10 years older than myself."*<sup>1</sup>

*"In the lay mind, anyone past 60 is ready for the discard . . ."*<sup>2</sup>

*"... there are only three principal phases in the span of life: infancy, adolescence and senescence."*<sup>3</sup>

*"One finds alert, interesting, active folks in the 80's and, on the other hand, there are people in the 20's and 30's who have all the characteristics of old age."*<sup>4</sup>



---

## THE REAL QUESTION

To the physician on the firing line of daily practice, the question of "how old is old?" seems academic. To him, a more valid question is "How can I allay the effects of the aging process?"



## FIVE PROBLEMS IN AGING

The answer, according to most authorities, is manifold, for five treatable problems seem to predominate. One, obviously, is gonadal hormone decline. Another is mild anemia. A third is the decreased production of gastric and digestive enzymes. Mineral-vitamin deficiency is the fourth. And the fifth — perhaps most important — is inadequate high-quality protein intake.

## THERAPY FOR AGING

Judging from this confused clinical picture of aging, therapy for the problem would appear difficult. However, most physicians agree that a product which could correct most or all of these five commonest problems would remove past obstacles to satisfactory response. Such a product would, essentially, be true "preventive geriatrics."

## NEOBON'S COMPREHENSIVE FORMULA

NEOBON®, a product of Roerig research, is a blended combination of the five most commonly indicated factors for prevention or treatment of the nonacute conditions of aging. Each soft, soluble capsule provides:

- Non-stimulatory gonadal hormone replacement
- balanced hematinic component
- digestant enzyme replacement
- specially formulated mineral-vitamin combination
- new lysine, for protein improvement\*

\* Protein deficiency among the aging apparently stems from their excessive intake of white-flour foods which furnish incomplete protein of low biologic value. White bread protein, for example, has been shown by nutrition studies in animals<sup>5</sup> to be deficient only in the amino acid, lysine. In human subjects metabolic determinations indicate that the addition of supplemental lysine to a basal white-flour protein diet can convert a negative nitrogen balance into a positive one.<sup>6</sup>



#### A WORD ABOUT SYMPTOMATOLOGY

In spite of jokes to the contrary, the patient who states in the professional office that "old age is creeping up" is a rare bird indeed.

Seldom is old age the presenting complaint. Thus the physician, after correcting the specific complaints, must re-evaluate the whole person to judge his candidacy for "preventive geriatrics."

Such people have much to gain from NEOBON therapy. The rewards are fuller, more active, more pleasurable years for patients past 40. The daily dose (3 capsules) of NEOBON provides:

L-lysine	150 mg.
Methyltestosterone	3 mg.
Ethinyl Estradiol	0.018 mg.
Pancreatic Substance***	150 mg.
Glutamic Acid	90 mg.
Rutin	15 mg.
Vitamin A (Palmitate)	6,000 U.S.P. Units
Vitamin D (Irradiated Ergosterol)	600 U.S.P. Units
Vitamin E (as Tocopheryl Acetate)	15 I.U.
Calcium Pantothenate	15 mg.
Thiamine Mononitrate (Vitamin B <sub>1</sub> )	1.5 mg.
Riboflavin (Vitamin B <sub>2</sub> )	1.5 mg.
Pyridoxine Hydrochloride (Vitamin B <sub>6</sub> )	1.5 mg.
Niacinamide	150 mg.
Ascorbic Acid (Vitamin C)	150 mg.
Vitamin B <sub>12</sub> (Oral Concentrate)	3 mcg.
Folic Acid	0.3 mg.
Liver-Stomach Substance**	300 mg.
Iron (from Ferrous Gluconate)	10.2 mg.
Cobalt (from Cobaltous Sulfate)	0.1 mg.
Molybdenum (from Sodium Molybdate)	2 mg.
Copper (from Cupric Sulfate)	1 mg.
Manganese (from Manganous Sulfate)	1 mg.
Magnesium (from Magnesium Sulfate)	6 mg.
Iodine (from Potassium Iodide)	0.15 mg.
Potassium (from Potassium Sulfate)	5 mg.
Zinc (from Zinc Sulfate)	1.2 mg.

\*\*Enzymatically active defatted material obtained from 1,500 mg. whole fresh liver and stomach.

\*\*\*Enzymatically active defatted material obtained from 750 mg. of whole fresh pancreas.

Dosage: 3 capsules daily, with meals.

Supplied: Bottles of 60 capsules, prescription only.

## NEW NEOBON LIQUID

### A GERIATRIC TONIC

Now also available for your consideration is NEOBON LIQUID, which provides hematinic action, improved carbohydrate and protein utilization, gonadal and thyroid hormone supplementation and a mild antidepressant action.

The pleasant tasting liquid is especially indicated when a combined attack against nutritional, physiological and mental depression is indicated. Each tea-

spoonful (5 cc.) of pleasant-tasting NEOBON LIQUID contains:

Ferrous Gluconate	30 mg.
Ascorbic Acid	30 mg.
d-Amphetamine Sulfate	0.5 mg.
Folic Acid	167 mcg.
Vitamin B <sub>12</sub>	2.5 mcg.
L-Thyroxine	0.1 mg.
Ethinyl Estradiol	1 mcg.
Methyltestosterone	1 mg.
Liver Fraction I	25 mg.
Ethyl Alcohol	0.5 cc.

Dosage: One teaspoonful twice daily before meals, or as required.

Supplied: In 16 fluid ounce bottles, prescription only.

#### Bibliography

1. Anonymous. 2. Rosenthal, P.: *Geriatrics* 10:382 (August) 1955. 3. Lansing, A. I.: Symposium on Problems of Gerontology, National Symposium Series No. 9 (August) 1954. 4. Mason-Hohl, E.: Quoted in *W. Va. Med. J.* 51:16 (January)

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CHICAGO 11, ILLINOIS

## MODERN THERAPEUTICS

—Continued from page 127a

concluded that the topical application of steroids provide immediate relief and may prevent the development of a chronic condition in self limited inflammatory conditions. No permanent cure may be expected in chronic dermatoses, but topical application will provide relief and control of the lesions. Topical application of the steroids may also prevent a need for systemic steroid therapy.

### Prevention of Incrustation Cystitis

Incrustation cystitis frequently complicates the presence of an indwelling catheter required in the practical man-

agement of aged, incontinent patients and those with a "cord bladder." Such cystitis may become dangerous and even fatal.

Methods for preventing damaging incrustation cystitis have recently been outlined by Murray Russell, M.D., Assistant Clinical Professor of Urology, College of Medical Evangelists, Loma Linda, California in the *Nursing Home Administrator* [10:12 (1956)]. These include (1) change of the Foley catheter at least once a week and (2) irrigation of the bladder three times a day with a suitable antibacterial solution. Among those which he has used and recommends is the broad-spectrum antimicrobial agent, Furacin Solution.

—Continued on page 138a



raw throats

respond best

Delectably Flavored  
Aspergum gives immediate  
and effective topical  
analgesia in the oropharyngeal area. Chewing  
increases salivation and  
relays throat stiffness.  
A welcome medication in  
throat irritations and  
especially after  
dental surgery.

to ASPERGUM®

WHITE LABORATORIES, INC.  
Rensselaer, N. Y.



**Helps her keep slim—and active**

## **ALTEPOSE**

When patients start to gain weight, they often become less active—and gain more weight! Health may suffer. You can stop this vicious circle, make it easier for patients to achieve and maintain normal weight by prescribing ALTEPOSE. It makes reducing easier because it provides 'Propadrine' to curb appetite, thyroid to release tissue-bound water, 'Delvinal' to relieve irritability.



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*potent*  
*antispasmodic*  
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**TENSION**  
**ANXIETY**  
**STRESS**

**CENTRINE<sup>®</sup>**  
WITH PHENOBARBITAL  
TABLETS

Centrine is Bristol Laboratories'  
brand of aminopentamide.

**BRISTOL LABORATORIES INC.**  
Syracuse, N. Y.

## MODERN THERAPEUTICS

—Continued from page 136a

### **Rauwolfia-Ephedrine as a Hypotensive-Tranquillizer**

T. M. Feinblatt, H. M. Feinblatt and E. A. Ferguson, Jr. review the history of rauwolfia and reserpine and emphasize their usefulness, not only in hypertension but also in anxiety, tension, stress and nervous disturbances in *J. A. M. A.* [161:424 (1956)]

They report on a series of 68 patients treated with rauwolfia preparations, 20 of whom developed untoward side effects. Among these were nasal congestion, excessive drowsiness, overeating, alarming nightmares, irrational behavior, and an incapacitating degree of agitated depression.


In all cases it was found possible to continue the use of rauwolfia preparations by adding ephedrine. A dosage recommended is 8 mg. of ephedrine with 0.1 to 0.25 mg. of reserpine, the combination being given three times daily—in the early morning, near noon and at 4 p.m. The ephedrine in this dosage did not interfere with the hypotensive action of the reserpine, and did relieve the side effects.

### **Promazine in the Treatment of Alcoholism**

Adequate sedation remains a prime requisite in the management of the alcoholic patient, but a completely satisfactory agent has not been demonstrated. Promazine has been found to reduce excitation and, at the same time, it lacks the pronounced and undesirable depressive effects associated with the use

—Continued on page 141a

in  
urinary  
tract  
infections  
of  
pregnancy



*"Pyelonephritis is... one of the most  
common complications of pregnancy."<sup>1</sup>*

# Furadantin<sup>®</sup>

BRAND OF NITROFURANTOIN

*"Successful results were obtained in all pregnant patients."<sup>2</sup>*

EATON LABORATORIES  
Norwich New York



**NITROFURANS**  
a new class of antimicrobials  
neither antibiotics nor sulfonamides

Average dose: one 100 mg. tablet,  
q.i.d.; 1 tablet with each meal and  
1 with food or milk on retiring.

Tablets: 50 and 100 mg., bottles  
of 25 and 100.

References: 1. Kass, E. H.: *Am. J. Med.* 18:764,  
1955. 2. Diggs, E. S., Prevost, E. C., and Valdear,  
J. G.: *Am. J. Obst.* 71:399, 1956.

in patients with colds...sinusitis...rhinitis

unplug that

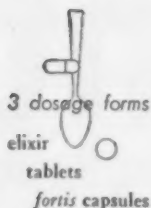


stuffed-up nose

orally with

**Novahistine®**

The marked synergistic action of a vasoconstrictor with an antihistaminic drug provides marked nasal decongestion and promotes normal sinus drainage. Oral dosage avoids harmful misuse of topical agents...eliminates nose drop rebound. Novahistine causes no jitters or cerebral stimulation.



3 dosage forms  
elixir  
tablets  
fortis capsules

Each Novahistine Tablet or teaspoonful of Elixir, provides 5.0 mg. of phenylephrine HCl and 12.5 mg. propenpyridamine maleate. Novahistine *Fortis* Capsules contain twice the amount of phenylephrine for those who need greater vasoconstriction.

**PITMAN-MOORE COMPANY** Division of Allied Laboratories, Inc., Indianapolis 6, Indiana

and...



when "head colds"



become "chest colds"



## Novahistine-DH

relieves  
congestion  
at both sites

Fortified Novahistine with  
dihydrocodeinone for the control  
of coughs and respiratory  
congestion

Each teaspoonful (5 cc.) contains:

Phenylephrine hydrochloride	10 mg.
Propenpyridamine maleate	12.5 mg.
Dihydrocodeinone bitartrate (may be habit forming)	1.66 mg.
Chloroform (approximately)	13.5 mg.
I-Menthol	1.0 mg.

(Alcohol content, 10%; sugar, 33%)

### PITMAN-MOORE COMPANY

Division of Allied Laboratories, Inc.  
Indianapolis 6, Indiana

## MODERN THERAPEUTICS

—Continued from page 138a

of the chlorinated compound. F. A. Figuerelli of Jersey City, New Jersey, *Industrial Medicine and Surgery*, [25:376 (1956)] studied the effects of Promazine administered to 54 unselected clinic patients. Twenty-four were in active delirium tremens when admitted; the condition was impending in 16, and the other 14 were acutely inebriated. All were in poor physical condition; concomitant illnesses were present in 41 per cent of the group, and 24 per cent showed evidence of liver disease. On some members of the group preliminary medications were used; 39 patients received Promazine immediately. The standardized dosage was 100 mg. by mouth four times daily. Most patients became quiet after the first dose, and slept soundly but not stuporously. In nine of the 16 patients

—Continued on page 142a

## MEDICAL TEASERS

Solution to puzzle on page 43a

T	I	B	I	A	E	D	E	M	A	T	O	S	E
R	A	L	L	I	C	U	R	I	E	S	L	A	W
A	T	A	L	A	N	T	A	D	R	A	G	E	E
U	R	U	S	H	I	O	L	D	A	R		R	
M	I	B		C	M	S	A	T	M	A			
A	C	O	N	I	T	E	M	Y	O	L	O	G	Y
			K	A	J	A	R	A	R	O	D	E	O
R	E	S	I	S	T	E	R	S		T	U	N	G
A	M	L	S	E		O	H	I	O		S	T	U
S	P	R	E	E	S		A	U	R	A			
P	E	A	R	L		I	M	P	E	R	F	E	C
U	R	N		H	M	S		N	E	I	G	H	
T	O	G	A		A	I		S	I	D	E	R	O
I	R	E	L	A	N	D		E	C	R	E	L	Y
N	S		E	S	S	E	N	E	S		Y	T	

## MODERN THERAPEUTICS

—Continued from page 141a

with impending delirium tremens, active symptoms were prevented. In the patients whose symptoms were active on admission, the average duration with treatment was 2.1 days, and the average hospital stay was 3.3 days. Several patients were able to leave the hospital on the day following admission. No side-effects were noted. The article states that Promazine can be administered with complete confidence; it is not habit-forming, and the clinical response is predictable.

The alcoholic patient can be treated in the regular medical ward. Since the alcoholic under medication is easily managed, these patients may be treated at home by the family physician if

supervision is available. The factor has distinct value both to the patient and his family since hospital insurance does not cover the treatment of alcoholics.

### Thorazine for the Psychiatric Patient

After numerous reports from Europe on the satisfactory results from the application of Thorazine, it has been used for fifteen months at the Taylor Manor Hospital, Ellicott City, Maryland for more than 300 patients. The author, I. J. Taylor in the *Bulletin of the School of Medicine*, University of Maryland [41: 19 (1956)], points out that this drug has specific indications as well as individual dosage requirements which should be observed at all times. It is effective in cases of agitation, anxiety reactions, obsessive compulsive neuroses, hypochondria, acute and chronic schizophrenia, the manic phase of manic-depressive psychosis, agitated depression, senile and arteriosclerotic psychosis, and personality character disorders including alcohol and narcotic addiction. Thorazine should not be used for depression without agitation, or coma from sedatives, alcohol or narcotics. It is seldom used alone, but should be considered as adjunctive therapy. It is excellent as a supplement to psychotherapy.

Average dosage ranges from 150 to 400 mg. daily, given orally if possible. Adequate dosage in intensity and duration is important. The individual's reaction to Thorazine must indicate the amount and the frequency of alterations in dosage. Proper regulation of the amount can scarcely be achieved in one month, and may require twice

—Continued on page 144a



### FOR "DISHPAN" HANDS

TASHAN™ CREAM 'Roche' provides welcome relief from symptoms and speeds the healing process.

Each gram contains:

Vitamin A . . . . . 10,000 U.S.P. units  
d-Panthenol . . . . . 50 mg  
Vitamin D<sub>2</sub> . . . . . 1,000 U.S.P. units  
Vitamin E (dl- $\alpha$ -tocopheryl acetate) . . . . . 5 mg

in a cosmetically pleasing absorptive base which fastidious patients will appreciate. Tubes, 1 ounce.

HOFFMANN-LA ROCHE Inc, Nutley 10, N.J.



*new*

*a new measure in therapy  
of overweight*

# PRELUDIN

(brand of phenmetrazine hydrochloride)

...reduces risk in reducing

A totally new development in anorexigenic therapy, PRELUDIN substantially reduces the risks and discomfort in reducing.

**Distinctive in its Chemistry:** PRELUDIN is a totally new compound of the oxazine series.

**Distinctive in Effectiveness:** In three years of clinical trials PRELUDIN has consistently demonstrated outstanding ability to produce significant and progressive weight loss through voluntary effortless restriction of caloric intake.

**Distinctive in Tolerance:** With PRELUDIN there is a notable absence of palpitations or nervous excitement. It may generally be administered with safety to patients with diabetes or moderate hypertension.

**For your patient's greater comfort:** PRELUDIN curtails appetite without destroying enjoyment of meals...causes a mild evenly sustained elevation of mood that keeps the patient in an optimistic and cooperative frame of mind.

**Recommended Dosage:** One tablet two or three times daily taken one hour before meals. Occasionally smaller dosage suffices.

PRELUDIN® (brand of phenmetrazine hydrochloride). Scored, square, pink tablets of 25 mg.  
Under license from C. H. Boehringer Sohn, Ingelheim.



GEIGY PHARMACEUTICALS  
Division of Geigy Chemical Corporation • Ardley, N. Y.

# GEIGY

## MODERN THERAPEUTICS

—Continued from page 142a

that time. Maintenance dosage cannot be generalized, but must be decided on an individual basis; frequently one-half or one-third of the daily dosage affords adequate maintenance. Side-effects are not serious. A frequent reaction, drowsiness, is a problem only if the patient drives a car or uses other machinery. Tremor and rigidity disappear upon reduction of the dosage. To avoid an erythematous reaction, patients are advised to remain in the shade. In 91 per cent of the patients treated there was definite improvement. Thorazine can be used safely by the general practitioner in office and home treatment.

## The Administration of Medication by Means of Suppositories

The historical background and current desirability of using suppositories, particularly of the polyethylene glycol base type, for the administration of medicinal substances was discussed by Cacchillo in *U.S.A.F. J.* [7:1009 (1956)]. A comparison of the blood levels obtained following the administration of 0.64 Gm. of acetylsalicylic acid in oral tablets and in suppositories having a base of polyethylene glycol, of cocoa butter or of glycerinated gelatin was given. Using the absorption, as indicated by the blood level, following the administration of the drug in tablet form as 100 per cent, polyethylene glycol (PEG) suppositories gave 93.1 per cent absorption, cocoa butter gave 65.5, and

—Continued on page 146a

# A favorite topical analgesic decongestant **NUMOTIZINE**

Prescribed for the relief of chest congestions, glandular swellings,  
localized rheumatism, bruises. 4, 8, 15 and 30 ounce jars.

**HOBART LABORATORIES, INC.**  
Chicago 10, Ill., U.S.A.


"Neither rain, nor snow, nor advancing years  
shall stay this courier!"



For persons past forty, good health is usually a source of great pride and satisfaction. Each succeeding year seems to heighten their delight and appreciation. To help these "senior citizens" maintain their vigor, prescribe GEVRAL, a comprehensive geriatric diet supplement that provides 14 vitamins, 11 minerals, and Purified Intrinsic Factor Concentrate—all in one convenient, dry-filled capsule.

# Gevral\*

GERIATRIC VITAMIN-MINERAL SUPPLEMENT LEDERLE

 dry-filled sealed capsules

for more rapid and complete absorption, freedom from after-taste. A Lederle exclusive!

 Lederle

LEDERLE LABORATORIES DIVISION AMERICAN CYANAMID COMPANY PEARL RIVER, NEW YORK

\*REG. U.S. PAT. OFF.

Each GEVRAL Capsule contains:

Vitamin A.....	5000 U.S.P. Units
Vitamin D.....	500 U.S.P. Units
Vitamin B <sub>12</sub> .....	1 mcgm.
Thiamine Mononitrate (B <sub>1</sub> ).....	5 mg.
Riboflavin (B <sub>2</sub> ).....	5 mg.
Niacinamide.....	15 mg.
Folic Acid.....	1 mg.
Pyridoxine HCl (B <sub>6</sub> ).....	0.5 mg.
Ca Pantothenate.....	5 mg.
Choline Dihydrogen Citrate.....	100 mg.
Inositol.....	50 mg.
Ascorbic Acid (C).....	50 mg.
Vitamin E (as tocopheryl acetates).....	10 I.U.

Rutin.....	25 mg.
Purified Intrinsic Factor Concentrate.....	0.5 mg.
Iron (as FeSO <sub>4</sub> ).....	10 mg.
Iodine (as KI).....	0.5 mg.
Calcium (as CaHPO <sub>4</sub> ).....	145 mg.
Phosphorus (as CaHPO <sub>4</sub> ).....	110 mg.
Boron (as NaB <sub>12</sub> O <sub>7</sub> ·10H <sub>2</sub> O).....	0.1 mg.
Copper (as CuO).....	1 mg.
Fluorine (as CaF <sub>2</sub> ).....	0.1 mg.
Manganese (as MnO <sub>2</sub> ).....	1 mg.
Magnesium (as MgO).....	1 mg.
Potassium (as K <sub>2</sub> SO <sub>4</sub> ).....	5 mg.
Zinc (as ZnO).....	0.5 mg.

Other Lederle geriatric products include: GEVRARON® Vitamin-Mineral Supplement Liquid with a wine flavor; GEVRAL® Protein Vitamin-Mineral-Protein Supplement Powder; and GEVRINE® Vitamin-Mineral-Hormone Capsules.

## MODERN THERAPEUTICS

—Continued from page 144a

glycerinated gelatin gave 52.9 per cent absorption. Thus, absorption from PEG suppositories appears to satisfactorily approach that obtained from oral tablets. The author also gave the formulas and directions for preparation of acetylsalicylic acid, chloral hydrate, aminophylline, and pentobarbital sodium suppositories in a PEG base composed of PEG 6000, 1540, and 400 in the ration of 4-3-3.

### Vitamin B<sub>12</sub> in the Treatment of Megaloblastic Anemia of Pregnancy and the Puerperium

Vitamin B<sub>12</sub> was administered to 10 patients with confirmed megaloblastic

anemia of pregnancy and the puerperium. The doses employed were large. A dose of 100 ug. was given intramuscularly from one to 14 times at daily intervals. Progress was evaluated by daily reticulocyte counts, hemoglobin determinations, and packed cell volume determinations, both before and during the treatment period.

According to Adams in *Brit. Med. J.* [4989:398 (1956)], satisfactory results were obtained in all 7 of the patients treated after delivery. However, in the three treated prior to delivery the results were not satisfactory. The addition of folic acid in a dose of 10 mg. three times a day did not provide additional response in two of the patients treated after delivery.

### Morning Sickness Relieved with Meclizine and Vitamin B<sub>6</sub>

A combination of 25 mg. of meclizine dihydrochloride and 50 mg. of pyridoxine hydrochloride in a single tablet (Bonadoxin) was administered to 65 mothers-to-be. The dosage employed was one tablet night and morning. Crawley reported in *West. J. Surg., Obstet. and Gynecol.* [64:463 (1956)], that nausea and vomiting was completely relieved in 53 of the patients. Eight other patients had only mild residual nausea but four patients did not obtain relief. Each of these four patients did not obtain relief had other complications.

There were no side effects observed among the patients, such as drowsiness, dry mouth, or stuffy nose. The author concluded that this combination appeared to be one of the most satisfactory antiemetic preparations available.

—Continued on page 150a



### FOR SIMPLE ECZEMA

TASHAN™ CREAM 'Roche' provides welcome relief from symptoms and speeds the healing process.

Each gram contains:

Vitamin A . . . . .	10,000 U.S.P. units
<i>α</i> -Panthenol . . . . .	50 mg
Vitamin D <sub>2</sub> . . . . .	1,000 U.S.P. units
Vitamin E ( <i>d,l</i> - $\alpha$ -tocopheryl acetate) . . . . .	5 mg

in a cosmetically pleasing absorbent base which fastidious patients will appreciate. Tubes, 1 ounce.

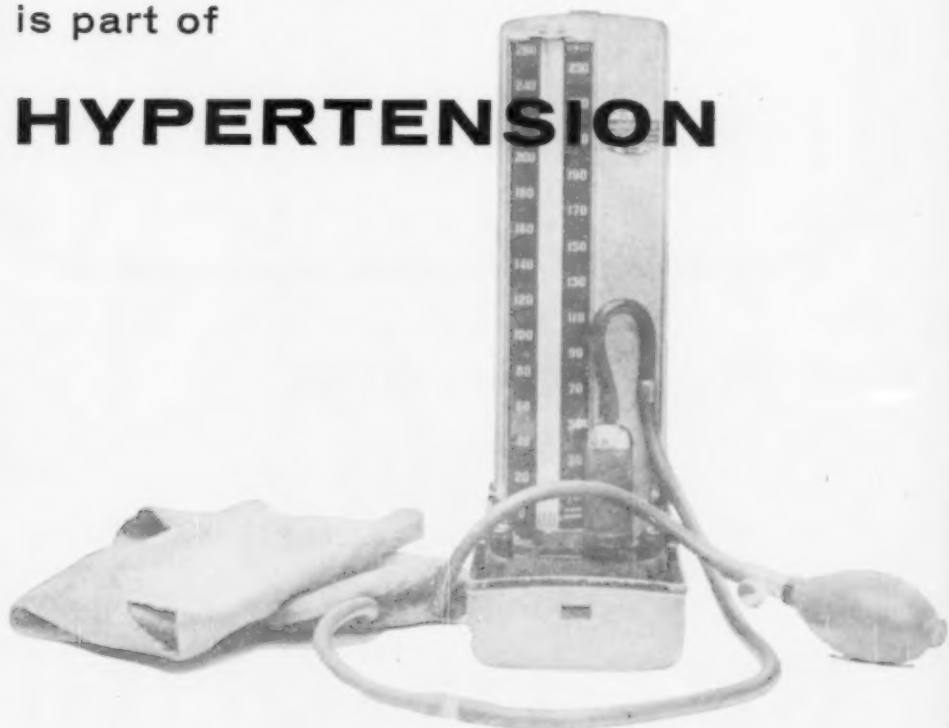
HOFFMANN-LA ROCHE Inc, Nutley 10, N.J.

... part of *every illness*

# ANXIETY

is part of

# HYPERTENSION



**Equanil**<sup>®</sup>  
MEPROBAMATE  
(2-methyl-2-n-propyl-1,3-propanediol dicarbamate)  
Licensed under U.S. Pat. No. 2,724,720

anti-anxiety factor with muscle-relaxing action

*In every patient . . .  
a valuable adjunct  
to the customary therapy*

Supplied: Tablets, 400 mg., bottles of 50.  
Usual Dose: 1 tablet, t.i.d.



Philadelphia 1, Pa.



effective<sup>1</sup> in over

91% of cases

# Terra-Cortril<sup>®</sup>

brand of oxytetracycline and hydrocortisone

## Topical Ointment

Proved effective in 526 of 575 cases of varied dermatoses. "No adverse reactions were noted..." in the entire group.<sup>1</sup>

"This topical ointment is clearly advantageous in combining in one preparation hydrocortisone [CORTIL<sup>®</sup>]... and oxytetracycline [TERRAMYCIN<sup>®</sup>], which is effective against many of the pathogens that commonly exist with pruritic dermatoses."<sup>2</sup>

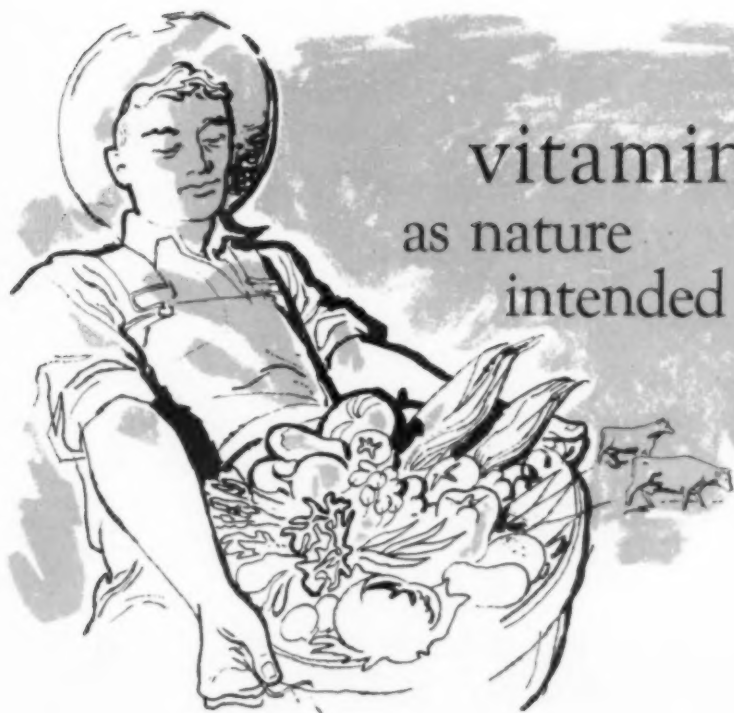
Supplied: In 1/2-oz. tubes, containing 3% oxytetracycline hydrochloride (TERRAMYCIN) and 1% hydrocortisone (CORTIL).



**PFIZER LABORATORIES,** Brooklyn 6, New York  
Division, Chas. Pfizer & Co., Inc.

1. Robinson, R. C. V., and Robinson, H. M., Jr.:  
South. M. J. 49:260, 1956.

2. Lubowe, I. I.: To be published.



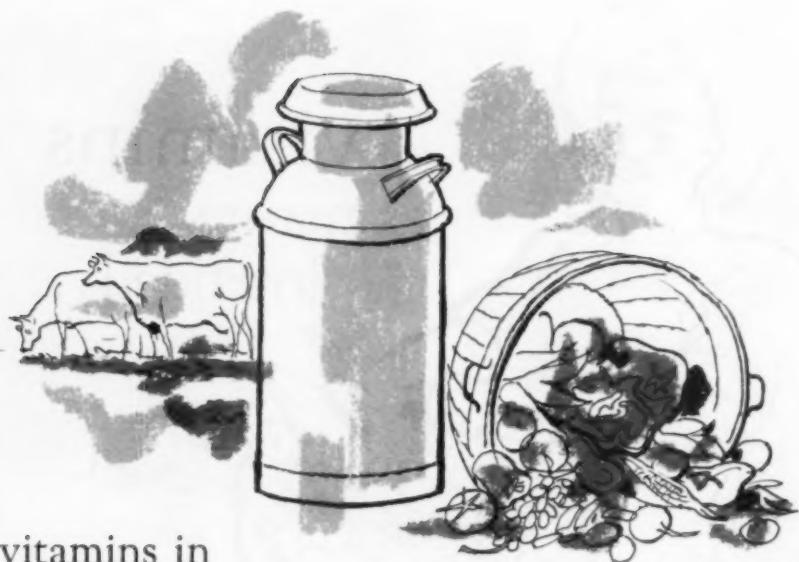
vitamins  
as nature  
intended...

# HOMAGENETS<sup>®</sup>

*the only solid homogenized vitamins*

THE S. E. MASSENGILL COMPANY

Bristol, Tennessee • New York • Kansas City • San Francisco



the vitamins in

# HOMAGENETS<sup>®\*</sup>

are better absorbed and utilized

Homagenets provide vitamins in the same way as do the most nutritious foods. The vitamins are subdivided into microscopic particles, then fused into a solid tablet form. As a result, they are absorbed and utilized much more efficiently than those in the usual compressed tablet or elastic capsule.

- ▶ Better absorption, better utilization
- ▶ Excess vitamin dosage unnecessary
- ▶ Pleasant, candy-like flavor
- ▶ No regurgitation, no "fishy burp"
- ▶ May be chewed, swallowed or dissolved in the mouth

*three formulas: Prenatal, Pediatric, Therapeutic*

*Samples available on request*

The S. E. Massengill Company • Bristol, Tennessee • New York • Kansas City • San Francisco

DOCTOR, do you need the  
extra dietary advantages  
of New Carnation Instant?



This exclusive crystal form of nonfat milk  
can give the busy physician a quick, protective "boost" no  
other form of milk can match – and it tastes so good!

Carnation Instant fits into your busiest professional day.  
These remarkable crystals burst into delicious, fresh flavor  
nonfat milk instantly, even in ice-cold water. Ready to enjoy,  
delicious for drinking, in any moment you can snatch.

Yet, the most interesting dietary  
and flavor advantage over bottled  
nonfat milk is Carnation Instant  
"self-enrichment." You simply  
add an extra tablespoon of crystals  
per glass for far richer flavor and  
a 25% increase in milk protein,  
minerals and B-vitamins. Your  
patients who "resist" ordinary non-  
fat milk will enjoy self-enriched  
Carnation Instant. So will you.



## MODERN THERAPEUTICS

—Continued from page 146a

### One-Stage Extirpation and Skin Grafting Operation for Chronic Leg Ulcers

An improved and more effective surgical treatment of chronic leg ulcers has recently been reported. In 100 cases, of which 75 were chronic varicose ulcers, the treatment proved 93% effective. Ulcers recurred in only 7 patients. Recurrence was due principally to patients' inadequate follow-up of instructions on post-operation care.

This improved technic was described in the *Journal of International College of Surgeons* [25:718(1956)] by Dr. Domingo Lucca, of Caracas, Venezuela, head of the department of plastic sur-

gery of Hospital Vargas and of the Cancer Institute of Luis Razetti, Caracas.

Successful treatment appears to depend upon a one-stage surgical extirpation of the ulcer accompanied by immediate skin-grafting and followed with adequate dressings.

Penicillin was administered preoperatively for 3 days in divided doses of 1 million units a day. The change of dressing was done on the 5th postoperative day at which time Furacin (Eaton dressings were applied. When all sutures had been removed, plain adhesive tape was applied over the graft beneath an Ace bandage and left in place for 6 to 8 days. The adhesive tape was then removed and the grafted site cleansed with ether.

Where minor areas of granulation tissue remained, the application of a Furacin-impregnated rayon dressing usually cleared up the trouble and provided stabilization of the graft.



### FOR SKIN IRRITATION

TASHAN™ CREAM 'Roche' provides welcome relief from symptoms and speeds the healing process.

Each gram contains:

Vitamin A . . . . . 10,000 U.S.P. units  
d-Panthenol . . . . . 50 mg  
Vitamin D<sub>2</sub> . . . . . 1,000 U.S.P. units  
Vitamin E (dl-alpha-tocopheryl acetate) . . . . . 5 mg

in a cosmetically pleasing absorptive base which fastidious patients will appreciate. Tubes, 1 ounce.

HOFFMANN-LA ROCHE Inc, Nutley 10, N.J.

### Arsthinol in the Treatment of Amebiasis

A new short period of treatment (5 to 7 days) has been described by Brown, Gebhart and Reich in *J.A.M.A.* [160:360 (1956)] for the successful treatment of intestinal amebiasis. Arsthinol (Balarsen) was administered to 34 patients. All of the patients were found to be negative for ameba upon follow up examinations one month or more later.

### Cyanocobalamin Absorbed Better Than Its Analogs

The absorption of cyanocobalamin is much superior to that of analogs following oral administration, according to

—Continued on page 152a

# the formula tells you why PRONEMIA is the MOST POTENT of all oral hematinics

Look at the formula and see for yourself why PRONEMIA has no equal. One capsule daily supplies a generous quantity of every known hemopoietic agent, including purified intrinsic factor concentrate. PRONEMIA is indicated for the treatment of ALL treatable anemias.

#### EACH CAPSULE CONTAINS:

Vitamin B <sub>12</sub> with Intrinsic Factor Concentrate.....	1 U.S.P. Oral Unit
Vitamin B <sub>12</sub> (additional).....	15 mcgm.
Powdered Stomach.....	200 mg.
Ferrous Sulfate Exsiccated.....	400 mg.
Ascorbic Acid (C).....	150 mg.
Folic Acid.....	4 mg.



*dry-filled sealed capsules (a Lederle exclusive!) for more rapid and complete absorption.*

## PRONEMIA\*

Hematinic Lederle



\*REG. U.S. PAT. OFF.

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK

## MODERN THERAPEUTICS

—Continued from page 150a

Rosenblum and Chow in *Proc. Soc. Exp. Biol. and Med.* [91:364 (1956)]. The authors studied the absorption of sulfato-, nitro-, and thiocyanocobalamin in comparison with cyanocobalamin. They also verified the fact that cobalamin urinary excretion levels constitute true absorption indexes. This fact was verified by studies of serum levels in human subjects and by fecal excretion in rats as compared with urinary excretion.

### New Anorexiant Reported Effective

Inhibition of appetite with significant loss of weight was seen in all cases of a group of 140 overweight patients treated with a new anorexiant, Preludin, in a

study by Dr. Adolph L. Natenshon, reported in *American Practitioner and Digest of Treatment* [18:1456(1956)].

Early satisfaction of appetite was almost uniformly mentioned by the patients. Treatment induced a pleasantly mild, plateau-type of stimulation characterized by a smooth and consistent effect over a period of four to five hours after administration.

The new drug was "remarkably well tolerated and the side effects were minimal". No significant changes in pulse rate, blood pressure, hematopoietic system, kidneys or blood sugar level were observed.

The drug was also administered to several patients with mild degree of hypertension and diabetes. In these cases, weight loss was accompanied by a reduc-

—Continued on page 154a

7 Locust Place, New York 17, N.Y.

PATIENT *Mrs. Jones*

**R**

**NEO-MAGNACORT\*** *3 sp*  
neomycin and ethamicort

*Sig. apply locally t.i.d.*

*Adolph L. Natenshon* M.D.  
\*trademark

RESERVED FOR TOPICAL USE ONLY

AVAILABLE ONLY

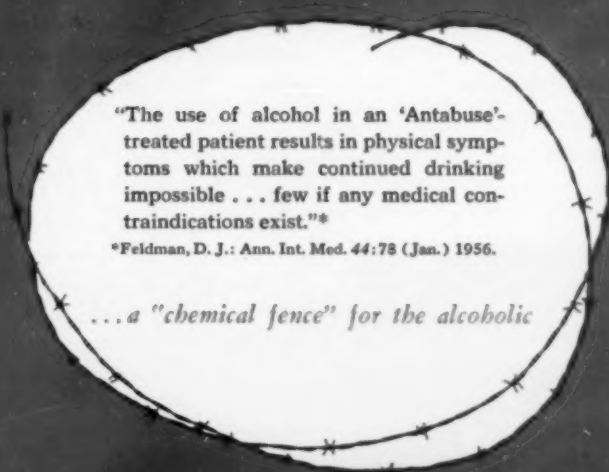
clinically proved in alcoholism

## "ANTABUSE"

brand of DISULFIRAM (tetraethylthiuram disulfide)

*Feldman reports:*

"...Antabuse therapy constitutes a major advance in treatment."<sup>\*</sup>



"The use of alcohol in an 'Antabuse'-treated patient results in physical symptoms which make continued drinking impossible . . . few if any medical contraindications exist."<sup>\*</sup>

<sup>\*</sup>Feldman, D. J.: Ann. Int. Med. 44:78 (Jan.) 1956.

*... a "chemical fence" for the alcoholic*

A brochure giving full details of therapy will be sent to physicians upon request.

"ANTABUSE" is supplied in 0.5 Gm. tablets (scored), bottles of 50 and 1,000.

AYERST LABORATORIES • New York, N. Y. • Montreal, Canada

1634

## MODERN THERAPEUTICS

—Continued from page 152a

tion in blood pressure as well as a decline in blood sugar levels.

Preludin (2-phenyl-tetrahydro-1, 4 oxazine hydrochloride) was found to be similar in qualitative pharmacological action to other sympathomimetic agents, but undesirable effects on the cardiovascular and central nervous systems are insignificant.

### **Asthma, Chronic Bronchitis and Emphysema Treated with Chlorpromazine**

Chlorpromazine is known to reduce tension without causing depression, and

to induce physiologic sleep. Its action is that of a central sedative, hypnotic and anticonvulsant; its antihistamine activity is slight. The drug has apparently found only scattered use in respiratory diseases. J. A. Crocket of Glasgow, *British Journal of Tuberculosis* [50:221 (1956)] reports the use of chlorpromazine given to 54 clinic patients, all with some degree of bronchospasm. Thirty-nine patients had asthma, ten had bronchitis and five had emphysema. The factor of emotional disturbance, present in more than half of the group was not overlooked. Chlorpromazine was given initially in a daily dosage of 75 mg.; this was frequently increased to 100 mg., and occasionally to 200 mg. daily for short periods. When improvement occurred, it was manifest within a few days, but maximum benefit usually occurred after three to four weeks. If there was no indication of improvement by that time, medication was stopped; if the response was favorable, the drug was continued for periods up to 50 weeks. Improvement in asthma or bronchitis was accompanied by a feeling of general well-being, and a lessening of aggression, tension and depression. As a result of the chlorpromazine treatment, symptomatic improvement occurred in 59 per cent of the patients, in many of whom the emotional factor was the more significant. Side-effects were mentioned by several members of the group, but they were slight, temporary, and did not necessitate termination of the therapy. The favorable action of chlorpromazine in lessening emotional tension was more striking when the patient's mental conflict had been long standing and deep-seated.

—Concluded on page 156a

reduce cough  
discomfort with  
**Toclose**  
BRAND OF CHLORPENTAMINE CITRATE  
selective, sure, safe

TOCLOSE EXPECTORANT COMPOUND  
TOCLOSE SYRUP  
TOCLOSE TABLETS

**Pfizer**

non-narcotic, non-opiate

evacuation of soft, well-formed stools is achieved dependably with SENOKOT through stimulation of Auerbach's plexus and restoration of normal bowel motility.

rehabilitation of the constipated bowel with SENOKOT permits gradual reduction of dosage and eventual discontinuance. It is "...a cure in the true sense of the word."\*

**DOSAGE:** Average starting dosage for adults is one level teaspoonful of the granules (or two tablets), preferably at bedtime. Dosage may be increased or decreased to meet the patient's specific needs. **GRANULES:** Cocoa-flavored in 8 and 4 ounce containers. **TABLETS:** Small and easy to swallow, in bottles of 100.

\*Abrahams, A.: Brit. Ency. Med. Pract., 2 ed., Interim Supplement, London, Butterworth (Mar.) 1964.

**EVACUATION PLUS REHABILITATION**

... assured  
in constipation with

*the natural bowel corrective*

**Senokot**

MADE BY STANDARDIZED CONCENTRATED ACTIVE PRINCIPLES OF CASSIA ACUTIFOLIA PODS

TABLETS / GRANULES



 *The Pfizer Laboratories Company* DEDICATED TO PHYSICIAN AND PATIENT SINCE 1882

100 CHRISTENSSON ST. NEW YORK 17, N. Y.

## MODERN THERAPEUTICS

—Concluded from page 154a

### **Tetrahydrozoline as a Pediatric Nasal Decongestant**

Very favorable clinical results have been reported from the topical use of the sympathomimetic agent, tetrahydrozoline, as a nasal decongestant. From a total of 646 patients treated with a 0.1 per cent solution, results were excellent in 90 percent, and fair in seven per cent. The preparation was used three to four times daily for periods of two to four weeks, the only side-effect noted in adults being irritated nasal mucosa in one patient. However, in three of the 84 children included in the 646 patients treated, drowsiness was noted. In order to avoid this reaction, a 0.05 per

cent solution of tetrahydrozoline called Tyzine is now available. H. A. Anderson of the Ohio State University College of Medicine, *Antibiotic Medicine & Clinical Therapy* [3:199 (1956)] has used Tyzine in treating 105 children ranging in age from three weeks to 11 years. In all cases the drug was used to relieve nasal congestion due to an upper respiratory infection. The dosage employed was two to three drops in each nostril four times a day for four successive days. The response to treatment was excellent in 73 per cent, fair in 25 per cent, and poor in two per cent. In the majority of the patients treated, relief lasted from three to four hours or longer. In only 12 patients the decongestant action lasted less than two hours. The tetrahydrozoline was well tolerated; the nasal congestion appeared aggravated in only one infant.

Direct, fast relief of **gi** and pain<sup>1</sup>: **Bentyl**  
**ga**  
**sp**  
**sm**  
**S**  
**S**  
Relieves the **I** pain where it hurts: the gut

2 caps t.i.d.

1. Hardin, J. H.; Levy, J. S., and Seager, L.: *South. M. J.* 47:1190, 1954.

THE WM. S. MERRELL COMPANY • New York • CINCINNATI • St. Thomas, Ontario

TRADEMARK: "BENTYL"

156a



MEDICAL TIMES

# NEWS AND NOTES

---

## Results of Wisconsin U. Cancer Survey

Most cancer patients and their families do not fear the disease, want to know more about it, and think cancer education saves lives, a report from the Wisconsin U. Tumor Clinic reveals.

Drs. Robert Samp and Anthony Curreri surveyed 560 persons on their attitudes toward cancer education. The

results of the survey indicate that persons most affected by cancer—the patients themselves and their families—feel cancer education is not being overstressed and is not resulting in “cancerphobia.”

This is probably the first survey which does not rely on personal impressions to estimate the value of cancer education.

“We realize that a study which includes only 560 persons is statistically inadequate for a conclusive report,” Dr. Samp said. “Nevertheless, the striking unanimity of opinion on certain questions indicates definite trends of thought of those most affected by the disease.”

The University survey showed these significant attitudes:

Fully 85 per cent of those interviewed felt they knew more about can-

—Continued on following page

# BRISTAPEN '200'

TABLETS

to relieve symptoms  
and help prevent sequelae  
of the common cold

**FORMULA:**  
each sugar coated  
tablet contains pro-  
pionine penicillin G  
(NHLB) units)  
200 mg., Neosamine®  
dihydrogen citrate  
25 mg., aspirin 150 mg.,  
phenacetin 150 mg.,  
cellulose 30 mg.

*Brand "Lactosem"™*  
brand of phenacetin

BRISTOL LABORATORIES, INC. Syracuse, New York

## NEWS AND NOTES

—Continued from preceding page

cer than did their parents, despite the fact that the vast majority considered the present cancer education program "not enough" or "just right." Only 20 persons, or 3½ per cent of the total, thought there was "too much" cancer education.

Ninety-four per cent agreed that fear of cancer was reduced by explanations offered in educational programs. Ninety-six per cent said cancer education aided early diagnosis, and fully 98 per cent said cancer education helps save lives.

"The responses to the survey show that in Wisconsin at least public cancer education has not created cancer or other health phobias," Dr. Samp said.

to reduce discomfort and complications of cough

# Toclase

BRAND OF CARBETAPENTARE CITRATE

**selective, sure, safe**

TOCLASE EXPECTORANT COMPOUND  
TOCLASE SYRUP  
TOCLASE TABLETS

**Pfizer**

**non-narcotic, non-opiate**

"The educational programs rather seem to be stimulating an awareness, an alertness or consciousness in maintaining good health."

More than 180 persons of the 560 interviewed felt that cancer education did not reach the people who need it most. These persons commented that rural areas and small communities did not receive enough education. Several men commented that women were receiving more cancer education through periodicals, movies, and social gatherings.

The survey uncovered several attitudes not directly related to cancer education. For instance, the question of whether to tell the patient he has cancer has disturbed many doctors. In most cases doctors feel that the patient will fare better emotionally when the entire problem has been discussed.

The patients' attitudes seem to reinforce the doctors' views. Eighty per cent said they wished to be told if they had cancer. The consensus of those who did not agree seemed to be, "It depends on the individual."

The vast majority of those questioned considered cancer "curable," and 90 per cent said public cancer education has helped clear up the question of whether or not it is curable.

The survey questions and the results:

1. Do you know more about cancer than your parents? Yes - 468, no - 78.
2. Has present public cancer education been: too much? - 20; not enough? - 406; just right? - 103.
3. Does reading or hearing about cancer make you fear it more? yes - 110, no - 431.
4. Does public cancer education  
A. Scare people? yes - 180, no - 326.

—Continued on page 162a



to restore appetite and promote weight gain

# **R LACTOFORT®**

L-lysine + vitamins + minerals

## *this baby needs help*

If he turns his back on food, the infant can neither gain weight nor grow properly.

Efficient protein synthesis requires all the essential amino acids, simultaneously, in the correct proportions.

But many foods in the infant diet are relatively deficient in lysine, compared with meat protein.

**Supplied:** In 46 Gm. bottles with special Lactofort measuring spoon enclosed.

## *Persistent anorexia calls for nutritional support with Lactofort*

This complete nutritional supplement helps to restore normal growth and perk up lazy appetites in infants with anorexia and impaired nutrition. It supplies physiologic amounts of L-lysine to raise the biological value of milk and cereal to that of high-quality animal protein. In addition, Lactofort provides generous amounts of iron, calcium and all the essential vitamins.

*Reference:* Williamson, M. B., in Albanese, A. A., et al.: New York State J. Med. 55:3453, 1955.

a dry powder . . . stable . . . odorless . . . tasteless . . . readily soluble

first with lysine



WHITE LABORATORIES, INC. • Kenilworth, New Jersey

**new!**  
**calmative**



**nostyn<sup>®</sup>**

2-ethylcrotonylurea, AMES

---

the power of gentleness  
for relief of daily tensions

---

- moderates anxiety and tension
- avoids depression, drowsiness, motor incoordination

## **different!**

- NOSTYN is a new drug, a *calmative*
  - not a hypnotic-sedative
  - unrelated to any available chemopsychotherapeutic agent
- no evidence of cumulation or habituation
- does not cause diarrhea or gastric hyperacidity
- unusually wide margin of safety—no significant side effects

**dosage:** 150-300 mg. three or four times daily.

**supplied:** 300 mg. scored tablets, bottles of 48.



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17656

# **Cold** **Weather and** **PSORIASIS**

The acid test of any therapy for psoriasis is the *winter season*. It is well known that the skin lesions are more prevalent, more extensive and more resistant to treatment during the winter months.

Regardless of the season, you can depend on RIASOL. Positive therapeutic results, with clearing or improvement of the cutaneous patches, were obtained in 76% of the cases in a clinical group which failed to respond to other therapy. Thousands of physicians are prescribing RIASOL in their cases of psoriasis.

Winter is also a bad time to neglect psoriasis. Without treatment the lesions may burrow deeper into the cutaneous layers. The time to use RIASOL is *now*.

RIASOL contains 0.45% mercury chemically combined with soaps, 0.5% phenol and 0.75% creasol in a washable, non-staining, odorless vehicle.

Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages required. After one week, adjust to patient's progress.

Ethically promoted RIASOL is supplied in 4 and 8 fld. oz. bottles, at pharmacies or direct.



## Test RIASOL Yourself

May we send you professional literature and generous clinical package of RIASOL. No obligation. Write

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BEFORE USE OF RIASOL



AFTER USE OF RIASOL

# RIASOL FOR PSORIASIS

## NEWS AND NOTES

—Continued from page 158a

B. Make people *less* suspicious of what they might have? yes - 242, no - 241. C. Help people to have a diagnosis made earlier? yes - 520, no - 18. D. Help lessen the fear of cancer by explaining it? yes - 499, no - 31. E. Clear up the question of whether cancer is curable or not? yes - 465, no - 54.

5. Do you now feel that cancer is not curable? yes - 67, no - 463.

6. Do you think public cancer education helps save lives? yes - 547, no - 9.

7. Has education about cancer made you too concerned about your body and your health? yes - 154, no - 391.

8. Do you visit your doctor more

often for checkups and special examinations because of public cancer education? yes - 349, no - 190.

9. If a patient has cancer, should he be told this fact? yes - 451, no - 66.

10. Is cancer education reaching the people who need it most? yes - 267, no - 181.

The complete results of the survey will be published in *Cancer* magazine.

### **Dr. Thomas Rivers Appointed Medical Director of Infantile Paralysis Foundation**

Dr. Thomas M. Rivers of New York City, formerly vice president of the Rockefeller Institute for Medical Research, has been appointed medical director of the National Foundation for Infantile Paralysis, it was announced

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# arlidin

helps your peripheral vascular patients



"strong muscle  
vasodilator activity and  
an adequate increase  
in cardiac output"<sup>1</sup>

in intermittent claudication  
diabetic vascular disease  
Raynaud's disease

thromboangiitis obliterans  
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night leg cramps

**arlidin** <sup>®</sup> HCl

brand of nylidrin hydrochloride  
tablets 6 mg.

dose: 1 tablet t.i.d. or q.i.d. bottles of 50, 100 and 1000.

recently by Basil O'Connor, president of the March of Dimes organization.

He succeeds Dr. Hart E. Van Riper.

### **NYU Courses of Interest to the GP**

A special course designed to give the practicing physician in the New York area the opportunity to see selected cases and participate in the staff discussions of these cases from the diagnostic and therapeutic point of view is being offered by the New York University Post-Graduate Medical School.

This course, to be given from 11:45 a.m. to 4 p.m. each Thursday during the trimester beginning January 3, 1957, will use for instructional purposes clinical material from the Fourth (NYU) Division of Bellevue Hospital Center

and University Hospital. This course is given under the supervision of Dr. Charles F. Wilkinson, Jr.

Other courses offered in January by the Post-Graduate Medical School of interest to the general practitioner, the internist and the pediatrician, include:

Seminar in dermatology and syphilology (for non-dermatologists)—a full-time course, under the direction of Dr. Marion B. Sulzberger, from January 14 through 18.

Pediatric refresher course—a full-time course from January 14 through 25, under the direction of Dr. Adolph G. DeSanctis.

Modern concepts in the etiology, diagnosis and treatment of heart diseases—a full-time course from January 7

—Continued on following page

**vasorelaxation  
more tissue oxygen  
improved muscle metabolism  
pain relief  
safe • rapid • sustained**

**walk longer, farther, in more comfort**



ARLIDIN dilates peripheral blood vessels in distressed muscles, relaxes spasm, increases both cardiac and peripheral blood flow... to send more blood where more blood is needed.

**"safe vasodilative agent of minimal toxicity and optimal tolerance"<sup>1,2</sup>**

1. Pomerance, J. et al. *Angiology*, June, 1955.  
2. Freedman, L. *Angiology* 6:52, Feb. 1955.

Write for samples and literature

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\*trade mark



## liquid lunches? prescribe **YUVRAL\***

Vitamins and Minerals Capsules Lederle

A potent diet supplement for the "nutritionally starved" patient—from early adolescence through late maturity. 11 vitamins, 13 minerals, plus Purified Intrinsic Factor Concentrate. In dry-filled, sealed capsules.



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when cough is a  
complication

# Toclase

BRAND OF CARBETAPENTHINE CITRATE

**selective, sure, safe**



TOCLASE EXPENTONANT COMPOUND  
TOCLASE SYRUP  
TOCLASE TABLETS

**non-narcotic, non-opiate**



## NEWS AND NOTES

—Continued from preceding page

through 11, under the direction of Dr. Charles A. Poindexter.

These are among the more than 100 postgraduate courses designed for specialists and non-specialists by the Post-Graduate Medical School each year. For further information, write: The Dean, NYU Post-Graduate Medical School, 550 First Avenue, New York 16, N.Y.

### 1956 Medical Writers' Fellowships Awarded

The annual awarding of fellowships in the American Medical Writers' Association was made by the President of the Association at a banquet held recently on the occasion of the 13th annual meeting of the Association. These fellowships are given "in recognition of high qualifications, personal and professional, and of established standing as a medical writer, journalist or publisher." Final approval is made by a three-fourths vote of the Association's Board of Directors. The following active Association members were awarded the fellowship certificate:

Suren H. Babington, B.A., M.D., Berkeley, Cal.

—Continued on page 166a

### "MEDIQUIZ" ANSWERS

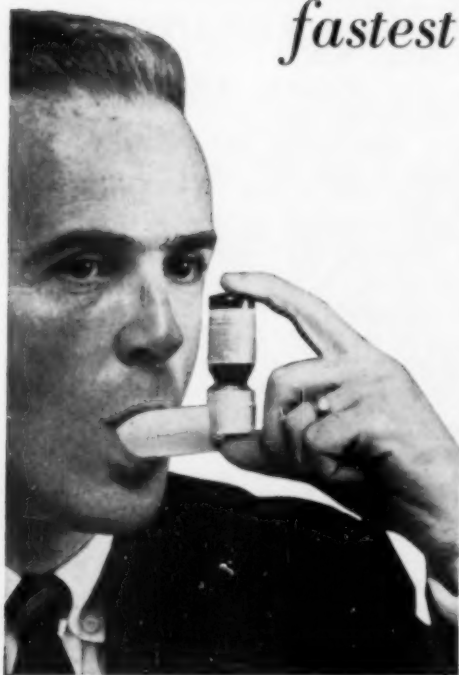
(from page 57a)

1(C), 2(C), 3(C), 4(A), 5(C),  
6(C), 7(D), 8(D), 9(B), 10(A),  
11(B), 12(A), 13(A), 14(A), 15(B),  
16(C), 17(A), 18(A), 19(C).

# *In Angina Pectoris*

## Medihaler-Nitro<sup>TM</sup>

### *fastest relief of the acute attack*



**M**EDIHALER-NITRO is octyl nitrite (1%) in aerosol solution; delivered by metered-dosage nebulization, using the lungs as portal of entry, it assures fastest relief and prolonged effect; it is free from disagreeable, irritating odor, and less apt to produce side actions than are nitroglycerin and amyl nitrite.

To be used only with the MEDIHALER® ORAL ADAPTER made of unbreakable plastic with no moving parts. Medication and Adapter fit into pocket-size plastic carrying case. One or two inhalations provide prompt relief of an attack of angina pectoris.

*MEDIHALER...The New Measured-Dose Principle of Nebulization*

**and for definitive therapy...  
fewer and fewer attacks  
of less and less intensity**

Long-acting tablets containing pentaerythritol tetranitrate (PETN) 10 mg. and Rauwiloid® (alscroxylon) 1 mg. reduce the incidence and intensity of attacks and lead to objective improvement demonstrable by ECG. Dosage: one or two tablets q.i.d., before meals and on retiring

## Pentoxylon®

**Riker**

LOS ANGELES



## excellent results in impotence

In a recent study<sup>1</sup>, coitus was made possible in 85% of 67 cases of impotency with the use of 1 cc. of GLUKOR intramuscularly twice weekly. Many were maintained on one injection weekly, others on as little as once monthly.

GLUKOR, a fortified pituitary gonadotropin, has been clinically demonstrated to be more effective and more rapid in action than testosterone. Unlike androgenic substances, there are no untoward side effects from prolonged use and no organic contraindications have been reported to date. Antagonism with any other drug has not been observed.

GLUKOR is also effective in male climacteric and male senility.

<sup>1</sup> Gould, W. L.: Impotence. M. Times 84:302 (March) 1956.



Each cc. contains:—200 I.U. chorionic gonadotropin, 25 mg. thiamine hydrochloride, 52.5 ppm. L (+) glutamic acid, 0.5% chlorobutanol and 1% procaine hydrochloride.

---ATTACH TO Rx BLANK---

RESEARCH SUPPLIES 101  
CAPITOL STATION, ALBANY, N. Y.

Please send me:—

—10 cc. vial(s) of GLUKOR—\$10.00 each

—25 cc. vial(s) of GLUKOR—\$20.00 each

☐ Literature on GLUKOR

Name \_\_\_\_\_

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City \_\_\_\_\_ State \_\_\_\_\_

## NEWS AND NOTES

—Continued from page 164a

Carroll J. Bellis, M.D., M.S., Ph.D.,  
F.A.C.S., Long Beach 13, Cal.

Herman Charache, M.D., Brooklyn  
15, N. Y.

Wilfred Dorfman, B.S., M.D.,  
F.A.C.P., Brooklyn 26, N. Y.

Dwight H. Hotchkiss, B.A., Phila-  
delphia 5, Pa.

Victor E. Levine, B.A., M.A., Ph.D.,  
M.D., Omaha, Nebr.

James L. McCartney, B.S., M.D.,  
F.A.C.P., Garden City, N. Y.

Harry Maeth, D.D.S., Masinee, Wis.  
Rolland J. Main, B.S., Ph.D., Nor-  
wich, N. Y.

William D. Snively, Jr., B.A., B.M.,  
M.D., Evansville, Ind.

Maurice S. Tarshis, B.A., M.S.,  
Ph.D., Berkeley, Cal.

Jacob J. Weinstein, M.D., Washing-  
ton, D.C.

### Tenth Anniversary of Wisconsin Child Guidance Center

One Tuesday in February a few years ago, a 12-year-old lad who had been the center of a long series of classroom out-breaks, set fire to a school wastebasket. Fortunately, damage from the blaze was slight.

In the months which followed, an understanding juvenile court judge and the local county Child Guidance Clinic

### WHO IS THIS DOCTOR?

(from page 47a)

The doctor is Oliver St. John Gogarty.

MEDICAL TIMES

worked in close cooperation with school officials and the boy's parents to solve a complex social problem.

This case is only one of many varied types which are being met squarely by an enlightened populace in the counties of Rock, Green, Jefferson and Walworth in southern Wisconsin. In these four counties, Child Guidance Centers, established over the past 10 years, have been providing the answers to troubled youngsters and families who might otherwise be in constant anxiety and turmoil.

Recently, several hundred people in the four counties celebrated the 10th anniversary of the founding of the first center via a Social Guidance Conference held in Janesville, Wisconsin. Four forums, conducted by top professionals in their fields, discussed the many social problems created by modern-day youth and the growing number of aged. Out of these forums is expected to evolve a better understanding and approach to these important segments of society.

Dr. Hertha Tarrasch, a former Chicago psychiatrist, directs the activities of the Rock County center and acts as a consultant in the others. She came to the county shortly after the Child Guidance Clinic had been established. Today, through her strong pioneering spirit and inexhaustible energy, she is generally recognized as the leading figure in mental health in southern Wisconsin. The four centers have served as models for those developed in other parts of the state and nation.

Actually, pioneering in the field of mental health and child guidance has been relatively inexpensive for the four counties. According to the statistics of the Rock County center, the past 10

—Continued on following page

## **NEW!** **a fortified androgen for the female**

Androgen therapy in the female is now made safer and more effective with the use of the new fortified androgen — **GLUTEST**.

The synergistic action of thiamine, glutamic acid and testosterone in **GLUTEST** reduces the amount of the steroid required to obtain effective relief of symptoms... regardless of pathology... with no untoward side reactions.<sup>1,2</sup>

Excellent results were obtained in the menopausal syndrome<sup>1</sup> and female senility<sup>2</sup>—with 1 cc. of **GLUTEST** intramuscularly twice weekly. Many patients were maintained with one injection weekly, others required an injection only once or twice monthly.

<sup>1</sup> Gould, W. L. : Personal communication

<sup>2</sup> Gould, W. L. and Strosberg, I. : N. Y. State Jrl. of Med. 53:661 (March) 1953.



Each cc. contains:—10 mg. testosterone, 25 mg. thiamine hydrochloride, 52.5 ppm. L (+) glutamic acid, 1% procaine hydrochloride, 3% sucrose, 2% benzyl alcohol, 0.5% polyoxyethylene sorbitan monolaurate and 0.25% sodium carboxymethyl.

**---ATTACH TO Rx BLANK---**

**RESEARCH SUPPLIES** 102  
**CAPITOL STATION, ALBANY, N. Y.**

Please send me:—

—10 cc. vial(s) of **GLUTEST**—\$10.00 each

—25 cc. vial(s) of **GLUTEST**—\$20.00 each

☐ Literature on **GLUTEST**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

## NEWS AND NOTES

—Continued from preceding page

years of progress has cost the county approximately \$1.20 per citizen.

Committees of educators, physicians, nurses, judges, probation officers, representatives of social agencies and leading citizens direct the policies of the clinics in each county. An executive committee meets once a month to discuss all problems and exchange ideas.

When a case is referred to a Guidance Center, a complete study is made which involves testing of the child by a trained psychologist to determine his intellectual abilities and possible emotional factors. Interviews are conducted with the parents by both a social worker and a psychiatrist. When necessary, an interview with the child is also conducted by the psychiatrist.



growing too fast?

prescribe **YUVRAL\***

Vitamins and Minerals Capsules Lederle

A potent diet supplement for the "nutritionally starved" patient—from early adolescence through late maturity. 11 vitamins, 13 minerals, plus Purified Intrinsic Factor Concentrate. In dry-filled, sealed capsules.

\*REG. U.S. PAT. OFF.



After thorough testing and clinical interviews are complete, a meeting of all persons working with the child and the family is arranged. Out of this meeting will come suggestions and recommendations which will result in an understanding and appreciation of the child's problem.

"When you reach understanding," says Dr. Tarrasch, "you're well on the way to eliminating the problem."

But, what about the extremely difficult cases? Those which show little or no response to treatment? The four counties have not, as yet, solved this problem. However, they do have ideas on the subject.

At present, the people in the various citizens' committees are discussing the development of separate camps for larger boys within each county where the youths would be under military-type discipline, but at the same time would have group recreations and would attend regular local schools.

A similar type of group living, but in a home rather than a camp, is being discussed for difficult girls.

### Appointment of Dr. Bartels

Dr. Johannes Bartels has been appointed associate professor of anesthesiology at NYU Post-Graduate Medical School of New York University-Bellevue Medical Center, it was announced recently by Dr. Donal Sheehan, dean.

Dr. Bartels received his B.A. degree in 1936 and his B.S. degree in 1938 from Amsterdam University. In 1947, at Johns Hopkins Medical School in Baltimore, Maryland, he received his M.D. degree.

Dr. Bartels was assistant professor of anesthesiology at Columbia Univer-

—Continued on page 170a

MEDICAL TIMES

***recognized***

as a potent, specific anti-arthritic

***established***

by over 100 million patient days

***substantiated***

in more than 700 published reports

# **BUTAZOLIDIN<sup>®</sup>**

(phenylbutazone GEIGY)

**potent, specific  
anti-arthritic**

Based on an impressive background of achievement attained over a period of four years involving both long-term and short-term therapy in all the major forms of arthritis, BUTAZOLIDIN is recognized as one of the most effective anti-arthritic agents currently available.

***relieves pain***

***improves function***

***resolves inflammation***

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for literature before prescribing it.

**GEIGY**



GEIGY PHARMACEUTICALS, Division of Geigy Chemical Corporation, New York 17, N. Y.

## NEWS AND NOTES

—Continued from page 168a

sity and assistant attending anesthesiologist at Presbyterian Hospital in New York City until his present appointment.

Among his other appointments, Dr. Bartels is senior anesthesiologist at The Bellevue Hospital Center and attending anesthesiologist at the Manhattan Veterans Administration Hospital.

### Mental Hospital Expands Research Dept.

The expansion of the Research Department of Hillside Hospital, Glen Oaks, Long Island, was announced recently by Dr. Joseph S. A. Miller, Medical Director. Hillside is a non-profit mental hospital, an affiliate of the Federation of Jewish Philanthropies.



### FOR DETERGENT RASH

TASHAN™ CREAM 'Roche' provides welcome relief from symptoms and speeds the healing process.

Each gram contains:

Vitamin A . . . . .	10,000 U.S.P. units
<i>d</i> -Panthenol . . . . .	50 mg
Vitamin D <sub>3</sub> . . . . .	1,000 U.S.P. units
Vitamin E ( <i>dl</i> -alpha-tocopheryl acetate) . . . . .	5 mg

in a cosmetically pleasing absorptive base which fastidious patients will appreciate. Tubes, 1 ounce.

HOFFMANN-LA ROCHE Inc, Nutley 10, N.J.

The Research Department will be divided into four sections: Experimental Psychiatry under the direction of Dr. Maximilian Fink; Biochemistry under the direction of Harry Goldenberg, Ph. D.; Internal Medicine under the direction of Dr. Lester Cohen; and Analytical Clinical Psychiatry, a new section.

The entire research project is being coordinated by Dr. Miller. In a special research report, Dr. Miller described three completed projects, twelve current projects and six planned projects. Projects in progress include evaluations of electroshock, insulin and reserpine, and studies of male hormones, chlorpromazine and other drugs in their relationship to mental health.

### Michigan U. Studying Tubercle Bacilli

At the University of Michigan, a research grant from Research Corp. is assisting H. M. Randall to study the minute differences between tubercle bacilli, some of whose strains cause human tuberculosis, while others do not. Such research may ultimately open up to the physician a more critical, scientific basis in diagnosing tuberculosis.

### Medical Schools in U. S. Show Vast Expansion

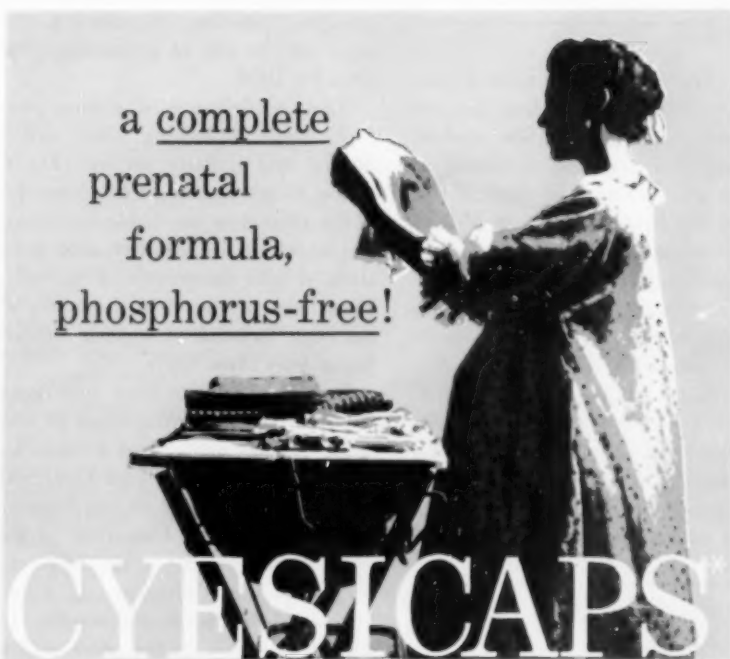
With a record enrollment and projected operating budgets hitting the 111-million-dollar mark, the nation's medical schools recently reported that 1955-56 was a year of "continuing progress."

For the seventh consecutive year, enrollment reached an all-time high, with 28,639 students in 76 approved four-year schools and six schools which pro-

—Continued on page 172a

MEDICAL TIMES

a complete  
prenatal  
formula,  
phosphorus-free!



# CYESICAPS

PRENATAL VITAMIN-MINERAL CAPSULES LEDERLE

If you find your patients complain excessively of muscle cramps due to high phosphorus intake, prescribe CYESICAPS. Each capsule provides 22 vitamins and minerals plus purified intrinsic factor concentrate; calcium is supplied as calcium lactate, its most readily assimilated form. This well-

balanced formula is indicated throughout pregnancy and lactation.

Dosage: 1 or 2 capsules 3 times daily.



dry-filled sealed capsules

a Lederle exclusive, for more rapid and complete absorption. No oils, no paste, no aftertaste.

Six capsules supply:

Calcium (as Lactate).....	600 mg.
Calcium Lactate.....	3720 mg.
Intrinsic Factor Concentrate.....	1.5 mg.
Vitamin A.....	6,000 U.S.P. Units
Vitamin D.....	400 U.S.P. Units
Thiamine Mononitrate (B <sub>1</sub> ).....	1.5 mg.
Riboflavin (B <sub>2</sub> ).....	3 mg.
Niacinamide.....	15 mg.
Vitamin B <sub>6</sub> .....	6 mcgm.
Ascorbic Acid.....	150 mg.
Folic Acid.....	2 mg.
Pyridoxine HCl (B <sub>6</sub> ).....	6 mg.

Calcium Pantothenate.....	6 mg.
Vitamin K (Menadiol).....	1.5 mg.
Iron (as FeSO <sub>4</sub> exsiccated).....	15 mg.
Vitamin E (as Tocopheryl Acetate).....	6 I.U.
Iodine (as KI).....	0.1 mg.
Fluorine (as CaF <sub>2</sub> ).....	0.09 mg.
Copper (as CuO).....	0.9 mg.
Potassium (as K <sub>2</sub> SO <sub>4</sub> ).....	5 mg.
Manganese (as MnO).....	0.3 mg.
Magnesium (as MgO).....	0.9 mg.
Molybdenum (as Na <sub>2</sub> MoO <sub>4</sub> ·2H <sub>2</sub> O).....	0.15 mg.
Zinc (as ZnO).....	0.5 mg.

\*Reg. U.S. Pat. Off.



LEDERLE LABORATORIES DIVISION AMERICAN *Gannett* COMPANY PEARL RIVER, NEW YORK

## NEWS AND NOTES

—Continued from page 170a

vide the first two years of medical training. The 1955 entering class also was the largest ever, with 7,686 students beginning their studies, according to the 56th annual report of medical education made by the American Medical Association's council on medical education and hospitals.

Sixteen American schools and one Canadian school reported the completion of construction projects costing more than 65 million dollars, while 17 American and two Canadian schools began projects totaling nearly 45 million dollars.

Expansion in the various phases of medical education is expected to con-

tinue. Classes scheduled for graduation during the next few years will be larger than the 1956 class. In addition, seven more schools will be graduating physicians by 1963.

However, before most of these physicians begin practicing, they will be drafted into military service. For example, 80 per cent of the 6,845 members of the 1956 class was liable for military service, either immediately after graduation or after completion of internship. Thus most of the 1956 graduates will not begin practice or specialty training for at least three years.

Four new schools have just opened or are in various initial stages of development. They are: Albert Einstein College of Medicine, New York City; Seton Hall College of Medicine and Dentistry, Jersey City, N. J.; University of Kentucky School of Medicine, Lexington, Ky., and the University of Florida School of Medicine, Gainesville, Fla. Three others are in the process of expanding their two-year basic medical science courses to the regular four-year program: the University of Mississippi School of Medicine, Jackson, Miss.; University of Missouri School of Medicine, Columbia, Mo., and West Virginia University School of Medicine, Morgantown, W. Va.



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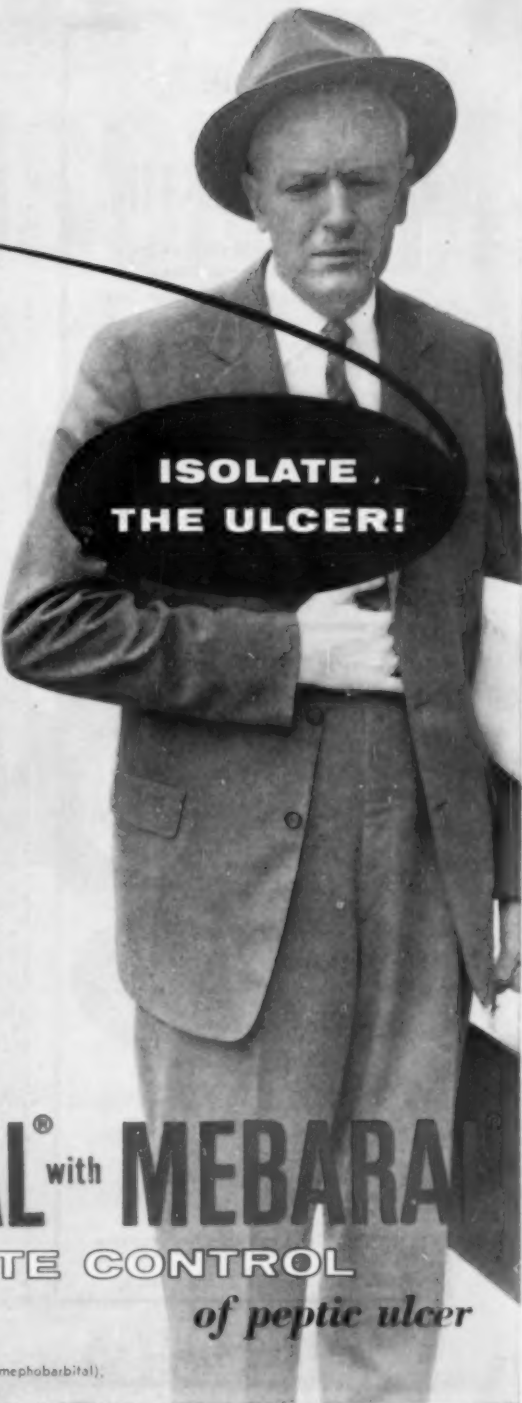
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### Goiter May Be Caused By Overconsumption of Certain Foods

Evidence that overconsumption of certain foods may lead to the development of goiter was presented recently by a doctor from the University of Oregon Medical School.

Reporting to a group of the nation's leading medical scientists at a "Sympo-

—Continued on page 174a



Since the ulcer patient can not get away from it all, prescribe MONODRAL with MEBARAL to more effectively isolate the ulcer from the patient.

MONODRAL with MEBARAL controls hyperacidity by a proved superior antisecretory action.

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## NEWS AND NOTES

—Continued from page 172a

sium on Endocrines and Nutrition" at the University of Michigan, Dr. Monte A. Greer said that high amounts of "goitrin" (goiter causative compound) had already been discovered in both rutabaga and turnip and that other foods were now being investigated.

"The goitrogenic potency of a variety of foods has been tested in man utilizing radioactive iodine as an investigative tool. Rutabaga and turnip were

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## WHAT'S YOUR VERDICT?

—Concluded from page 33a

The decision was reversed, with directions to the medical council to set aside its order of expulsion: "Public policy should ban a medical association by-law which holds over each of the members the threat of expulsion if in his testimony (oral or written) before a court or other judicial body he 'disparages, by comment or insinuation,' another physician. The canon here involved, however, contains not a single word about the duty of one physician toward another when testifying as a witness in a judicial proceeding. It is a fair inference from such silence that the American Medical Association harbored no intent to arrogate to itself the state's prerogative of defining the duties of witnesses in judicial proceedings and the prescribing of penalties for the violation of such duties."

Based on decision of  
California District Court of Appeal

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## NEWS AND NOTES

—Continued from page 174a

found to be most active. In subsequent study of the seeds of these and other Brassicae (a genus of plants that includes rape, turnip, rutabaga, black mustard, cabbage, cauliflower, Brussels sprouts and kale) it was possible to isolate the active antithyroid agent. This compound, "goitrin" (L-5-vinyl, 2-thio-oxasolidone), is obtained in relatively high yield from most Brassica seeds and from the edible parts of rutabaga and turnip," Dr. Greer reported.

In reporting on work already conducted with vegetables known to contain a substance called progoitrin which contains "goitrin," Dr. Greer said,

"Although the ingestion of vegetables known to contain progoitrin has not yet been shown to be a significant factor in the etiology of goiter, it is possible that the consumption of large amounts of foods containing this or other, as yet unknown, goitrogenic materials, may lead to the development of goiter in man."

### 31,028 Physicians Taking Graduate Training

One in seven physicians in this country is taking graduate medical training either as an intern or a resident.

According to the annual report on internship and residencies, prepared by the American Medical Association's Council on Medical Education and Hospitals, the number of medical school

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graduates taking further training continued to increase in 1955-56.

There were 9,603 graduates serving internships in 1955-56, an increase of 537 over 1954-55, while 21,425 were serving residencies, an increase of 931 over the preceding year. The training was offered by 1,373 council-approved hospitals.

Eighty-three per cent of all available internship positions were filled last year as compared with 82 per cent in 1954-55. The percentage of filled residency positions also increased from 80 to 81 per cent. The slightly higher rate of filled positions is accounted for by the number of foreign medical school graduates taking training in American hospitals, the report said. Approximately half of all positions not taken

by American graduates are filled by foreign graduates.

The report in a recent issue of the *Journal of the A.M.A.* also showed:

—Since 1914 there has been an increase of 44 per cent in the number of approved hospitals and an increase of 275 per cent in the number of internships offered.

—Federal hospitals offered 5 per cent of the available internships, while nonfederal governmental hospitals offered 31 per cent and nongovernmental institutions the remainder.

—There has been an increase in the average monthly cash stipend paid to interns.

—The council now approves residencies in 30 specialties and sub-specialties, including aviation medicine.

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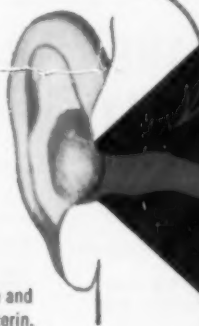
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